SUPPLEMENT.

e Kining Immal,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Original Correspondence.

FOREIGN MINING AND METALLURGY.

FOREIGN MINING AND METALLURGY.

nothing of a very novel character to report in regard to
iron trade. The general tone of the market has not vamore and more complaints are made as to the prolonged
in affairs. The committee of French forgemasters, in
up the situation, call special attention to the continued
of coal on the one hand, and to a notable reduction in
uption of merchants' iron on the other hand. This reducvolved a sensible fall in prices at several points, but this
ust entirely of a local nature. As a natural consequence
ent state of affairs, a certain number of blast-furnaces have
nout. Such a policy as this is the only one that can reset entirely of a local nature. As a natural consequence ent state of affairs, a certain number of blast-furnaces have nout. Such a policy as this is the only one that can revithin a given time an equilibrium between production mption, and the result will be the more easily attainable nowhere any stock of very great importance. The comsider that the demand for rails has been well supported and that prices have been well maintained as well for steel rails. The Paris, Lyons, and Mediterranean Railpany has ordered from the Creuzot and the Horme works, from MM. Harel and Co., 36,000 tons of rails, at 12.78, and 6000 tons of rails, at 12.78, to compare these prices with Belgian quotations for choscillate round 11.74s. per ton, while merchants' iron about the same price in Belgium as in France. Steel suspice in France, and is even advancing, a circumstance lexcite no surprise when we take account of the greater loyed by this metal, especially as regards rails. The Westnece Railway Company has ordered 1000 tons of steel rails ton, a price much higher than that last reported. Irrenee Railway Company has ordered 1000 tons of steel rails ton, a price much higher than that last reported. Irrehowever, of rails, and railway matériel, the various deformantactured iron are much neglected, and the buildat Paris is especially in a state of depression, which avily upon the girder market. The exports from France teight months of this year amounted to 172,000 tons, as with 189,000 tons in the corresponding period of 1872, falling-off this year! of 9 per cent. Two months since, the corresponding diminution stood at 20 per cent., so must have been some revival in the exports of late. The f pig and castings, iron, and plates into France in the first aths of this year amounted to 124,000 tons, or about the nitity as in the corresponding period of 1872. The imports inerals into France in the first eight months of this year 600 tons, or 89,000 tons, or 20 per cent. more than in the ding period of 1872. The Mokta-el-Hadid Magnetic Iron Company will pay on Nov. 3 an interim dividend of 4 per 1873.

is in coal has not experienced any very notable change in A slight fall in prices has, however, been noted in all quapt those coming from Belgium. It is stated with regard inchase of Saarbruck (Prussian) coal by the Eastern of ailway Company, to which reference was made last week, ugh the conditions have been duly accepted on either side, thas not yet been actually signed. Numerous contracts restated to have been concluded recently in France, but hese contracts are of much importance, and consumers are to be purchasing to supply their most pressing and imequirements.

In the sudden fall which has taken place of late in the pressure of the presence of the presenc

equirements.

It is well known that by the close are, where the supported with the standing the sudden fall which has taken place of late in erature, there has been no further advance in coal in Belt Mons and Charleroi the extraction is being increased as possible, but it still does not attain the importance which be expected to present. The mines are said to be working ell, but the extraction per man is still less than formerly, whole, there are only small stocks, and prices have exhipted and important concessions are, however, made in order to not expected to more upon relatively moderate terms. Nevertheless, ical industry is better maintained in the Liége basin than her iron-producing districts of Belgium, fewer furnaces en blown-out. Orders for metallurgical works and glasse, however, as scarce and poor in the Liége district as in Belgian industrial centres, and no immediate improvement bked for in the state of affairs. Coke is dealt in in Belgium er and very variable terms; many furnaces are being t. very variable terms; many furnaces are being

t.
in the rate of discount has checked the advance which herwise have possibly appeared in copper upon the Paris Chilian in bars, delivered at Havre, has made 90%; ditto 94%; tough English, 96%; and Corocoro minerals, 93% per per has been well maintained upon the Marseilles market; b plates has made 84%. Per ton. Tin has been rather better at Paris; Banca, delivered at Havre or Paris, has made on; Straits ditto, 130%, per ton; and English, delivered at Rouen, 129%, per ton. Tin has been rather weak upon the market. After having remained stationary for some time market. After having remained stationary for some time on of Banca has improved in Holland; at the last dates quoted at Amsterdam at 73\frac{1}{2}fls. to 74fls. Tin has shown animation at Rotterdam; Banca was last quoted at 73 fls. In tin markets have been generally quiet, and transactions atted no great importance. The production of Spanish been reduced through the unfortunate course taken by irs in Spain; as from Nov. 1, 1873, the Spanish Governatia, the de facto Government at Madrid—has imposed a per cent upon all lead exported from Spain. There has firmness in lead at Paris, where the article has become ench lead, delivered at Paris, has been quoted at 244. 4s.

281. 12s. per ton. The German zinc markets have firmly supported

281. 12s. per ton. The German zinc markets have firmly supported previous rates.

The stagnation in metallurgical affairs which has set in in Belgium is beginning to excite real uneasiness. The works which are not altogether idle are only working part of the week, and more blast-furnaces and puddling-furnaces are expected to be shortly blown out. Prices have been rather feebly supported, purchasers being rare. The proprietors of ironworks generally refuse to conclude long-termed contracts, having regard to the uncertainties which the future has in reserve. The new railway tariff which has been applied to the conveyance of Luxembourg minerals since Sept. I has given rise to numerous recriminations on the part of industrials in the Hainaut; for certain works, such as Acoz and Thy-le-Château, the rates of transport have been actually increased, although they looked for an altogether different solution of the problem. These establishments have only been able to save themselves by special conventions which they have concluded with the Great Central Belgian Railway, upon conditions more favourable than those offered Belgian Railway, upon conditions more favourable than those offered beigian Railway, upon conditions more ravourable than those offered by the Belgian State lines. The South of Charleroi Blast-Furnaces and Ironworks Company paid, on Oct. 31, a dividend of 1l. 4s. per share. The dividend of the Luxembourg Blast-Furnaces Company for 1872-3 has been fixed at 4l. per share. The John Cockerill Com-pany appears to have done a pretty good year's work in 1872-3; the dividend paid for the year (6l. per share) absorbs altogether 90,000l,

ROCK BORERS:

SIR,—We have noticed in last week's Journal some remarks on the subject of Rock Drills by your correspondent "X." and our name having been mentioned by him will justify our asking you to insert the following few lines:—

"X" has seen no illustration of "Ball's Drill." as "Ball

1.—"A" has seen no illustration of "Ball's Drill," as "Ball" has no drill of his own.

2.—His remarks about "Ball's Drill" being 8000 miles long and weighing 62,000 tons are evidently intended for a joke, as we must in all charity suppose that your correspondent has not mistaken a trade mark for a mechanical illustration of machinery.

3.—We cannot admit that a striking action is necessarily bad. All

rock drills, except the Diamond Drill, are small steam-hammers, and we all know steam-hammers to be reliable machines; it only requires to regulate the striking action, to make the parts simple, few in number, and sufficient in strength.

few in number, and sufficient in strength.

4.—The drills which we can recommend to the public are of four different classes—none of them having any similarity with the Burleigh, or Power Jumper, both of which we introduced formerly into this country, and with the qualities and faults of which we are, therefore, well acquainted; nor with the "Kainotomon," which is, in our opinion, the Power Jumper with a new name.

5.—The "A" machine of our list has its valve worked independently of the striking piston's action, as "X." desires it to be.

6.—When several hundreds of machines have heen sold in a somewhat limited district, and when, by their use, and after a long pro-

what limited district, and when, by their use, and after a long probation, results have been obtained from three to seven times greater than had previously been accomplished by hand labour; the machine is entitled to be called, in "X.'s" own words, a "trusted indispensable assistant."

7.—If the mysterious "X," is really connected with mining, or

dispensable assistant."
7.—If the mysterious "X," is really connected with mining, or collieries, we shall have great pleasure in showing him documents to substantiate our remarks, and to give him every facility to see our various drills at work in the mines. Should the unknown quantity "X," however, represent some of our competitors or their agents, your readers would surely not expect us to give special information to our adversaries, and we would in that case decline further correspondence.—Blackfriars, Oct. 27.

CHARLES BALL AND CO.

ROCK BORERS.

SIR,-I regret not having seen, until yesterday, the Mining Journal Sin,—I regret not many seem, after yesteray, the many solution of Oct. 11, which will account for my tardy reply to the queries of Messrs. Davies and Kember.

1.—I have never used a borer in a shaft, but the telescopic columns sent out with the first McKean drills three years ago can be fixed horizontally on a shaft as easily as vertically in a level.

2.—I do not include stokers wages or coal in my estimate. Water is my motive-power—a sewant requiring neither wages nor fuel.

2.—1 do not mende stokers wages or coal in my estimate. Water is my motive-power—a servant requiring neither wages nor fuel. Had steam been required I should never have tried a borer at all. When I spoke of 20 fms. of level being let at 5. 10s, per fathom, I meant let to the miners, and subject to the usual stoppages for candles, powder, and drawing, which the men always pay for. The comparison was between hand labour and machine labour. We have at the present moment, in an adjoining mine, a forehead going at 120 per fathom by hand with gunpowder in the old way, with four 12. per fathom by hand, with gunpowder in the old way, with four men. In four weeks they have cut 7 feet only; if you deduct candles, powder, and drawing the men will have earned only 14s. a-week clear. Compare this with my machine men earning 28s. a-week for four weeks, and cutting 8 fms. in a much worse place. I did not enter into the question of oil to the machinery, or the first cost of the machinery, or wear and tear or wages of blacksmith.

cost of the machinery, or wear and tear or wages of blacksmith.

3.—I arrive at the price per fathom simply by what the miners agree to take it at on bargain-day.

We are driving in the grit beds below the fourth bed of lime. These beds are far harder and much worse to drive in than granite or any other solid uniform rock. It is like driving through a pack of cards, so to speak, with the beds dipping or rising in front of the improve which as every miner knows seeks to follow the line of jumper, which, as every miner knows, seeks to follow the line of cleavage in the beds, which vary in thickness from 6 inches to 2 ft., so that in a hole about 6 ft. deep it has to cross these lines of cleavated no great importance. The production of Spanish een reduced through the unfortunate course taken by its in Spain; as from Nov. 1, 1873, the Spanish Governate, the defacto Government at Madrid—has imposed a per cent. upon all lead exported from Spain. There has been grain, where the article has become shall lead, delivered at Paris, has been quoted at 244. 4s. Per ton; and Belgian and German ditto, 244. per ton. There has lead has also presented rather a better are many business in lead has presented no great activity, have remained firm. There has been little activity in the trained at Paris, Silesian, delivered at Havre, has made to the Mining Journal. Dynamite will not lift the height of a lead to great activity of the Mining Journal. Dynamite will not lift the height of a lead to great activity of the Mining Journal. Dynamite will not lift the height of a lead to great activity of the Mining Journal.

mountain, or do any good in a hole that is fast at top, bottom, and sides; to an ordinary miner such a picture is simply ludicrous. If I had six borers instead of one I could not to any advantage do more in a close forehead 4 to 5 feet wide than bore the necessary number of holes. What sort ef a level or shaft Mr. Davies may be driving wherein it is possible to bore 96 ft. per diem I am at a loss to imagine; but I wish he would come here and try. I have a very good opinion of the McKean drill, but Mr. Davies and his Burleigh have, according to his statement, "licked me into a cocked hat."

In reply to Mr. Kember's questions, I beg to state that the holes are planted in the forehead just as the miners think each hole can or ought to be put in order to get the greatest possible result. No engineer (that ever I saw) knows how to do this. To bore a hole 6 feet deep will require the jumper to be changed at least six times, and as many more times as a jnmper nose happens to break; perhaps an average of an hour to each 6-ft. hole would be near the mark. A foot in five minutes is abaut the speed of the machine when working, and blunt or sharp, + or chisel-shape, makes very little difference. The holes are blasted singly. I never heard of powder or dynamite being placed anywhere except at the bottom of the hole; to put sand or clay at the bottom of a hole where the explosive ought to be would leave what miners call a candlestick, and split the rock without getting it. A candlestick anywhere is a sign of bad mining, a waste of time, labour, machinery, powder, and money. Apologising for this lengthy letter—

GEO. WM. DENYS.

Draycott Hall, Richmond, Yorkshire, Oct. 25.

ROCK BORERS.

ROCK BORERS.

SIR,—I never reply to anonymous writers, but, as it may be of some interest to the readers of your valuable Journal generally, I am pleased to give such information as I am able. The length of the cylinder of my "kainotomon" is 3 ft. 1 in., diameter of cylinder 3 in. The drill will start at any point in the stroke, excepting at the dead centre, and in feeding it may be carried 3 in. out of stroke without causing the machine to stop—qualities very important. The valve tappet is made of steel, and is to all appearances durable. Whether it will last 12 months remains to be seen, but I do not attach much importance to this as it could be replaced in a few minutes at a small cost. The remarks as to making working parts do not fairly apply to the "kainotomon." The only parts within the cylinder, besides the rotating arrangement, are the pistons, and the valve and tappet, which is one piece. To give the machine its due, I have found as yet the "kainotomon drill" a plain, free going, economical servant, and not "an obstinate, fitful, ill-constructed slave."

Mold, Oct. 28.

COAL A DANGEROUS CARGO.

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SIR,—The enquiries ordered by the Board of Trade into the causes of the loss of vessels have of later followed one another in rapid succession, and the result of these enquiries has been one and the same in all cases of ships carrying coal when the loss took place by explosion. The foggy and rainy season having now set in, it is of the utmost importance that coal owners, coal merchants, or carriers, should be fully acquainted with the dangers to which they are exposed. Every day I hear of explosions on board ships, all produced by the same agency, though the circumstances attending the working of this agency may be ever so multifarious. The chemical process by which all these explosions are brought about is as follows:—When large quantities of coal are stored, or rather pent up, in the ing of this agency may be even a many constant about is as follows:—
when large quantities of coal are stored, or rather pent up, in the hold of a vessel, light carburetted hydrogen is constantly produced through the decaying and breaking up of the cells of the coal; the extent to which this substance is generated depending on the nature of the coal carried. In steamers carrying gas coal the dangerous character of the cargo is generally known to those in charge of the ship, and measures of caution are taken accordingly. The same may be said of vessels carrying bituminous coal; but in the case of steam coal it is not so. The accidents happening through explosion on board ships laden with steam coal are due to the same cause as those produced on board ships laden with other descriptions of coals; but produced on board ships laden with other descriptions of coals; but in the former case the way in which the light carburetted hydrogen is set free differs considerably from the way in which this is done in the latter case

in the latter case.

Generally speaking steam coal is dry, brittle, and smokeless; of these qualities brittleness is the one from which danger chiefly arises. The Admiralty have ordered that steam coal supplied to them must be possessed of considerable cohesion of its particles, so as to prevent it from being "broken up by the attrition of the ship in rough weather." The reason of this is not only that the coal being broken up its fragments becomes too small for use, but because also in such a case the explosible gas would issue from the cells of the coal, in which it exists in sufficient quantity to be a source of great danger, calling for the most stringent means of precaution. But it is precisely when this action of breaking up takes place that it becomes exceeding difficult, if not impossible, to adopt these means. In rough as well as in foggy weather the hatchways or other means of ventilating the ship are, partly from habit and partly from necessity, battened down air-tight. The dangerous gas being then generated finds no means of egress save through crevices or pipes into empty parts, such as store-rooms, forecastle, or the like, where it empty parts, such as store-rooms, forecastle, or the like, where it accumulates, and eventually explodes. It will be said that steam coal being wanted it must be carried. This I do not gainsay for a coal being wanted to must be carried. This i do not gainsay for a moment; but I contend that for a long sea passage, and in a rough season especially, the least dangerous descriptions of sea coal should by preference be chosen. I know several seams yielding coal that would not prove dangerous, provided it be not shipped fresh from the collisions.

the collieries.

Amongst these I may mention the coal turned out of the Thornly seam, belonging, I think, to the original Hartlepool Collieries Company. This coal is very hard and compact. The same seam contains but very little bituminous coal, nearly the whole of the out-put being good steam coal. The average result of several analyses to which I have submitted specimens of this coal is as follows:—Fixed carbon, 79-60; mineral ashes, 3-75; volatile and combustible matter, 16-30; Moisture, 0-35 = 100-00. Its caloric power is 9-25. It is satisfactory to know that the seam alluded to is as yet far from being exhausted, it being estimated that it still contains upwards of 1,000,000 tons. 1,000,000 tons.

No accident arising from explosion of this coal, either in the colliery itself or on board ship, has as yet come to my knowledge, and in evidence I had occasion to give at a recent Board of Trade enquiry, it gave me pleasure to be able to state that I considered this coal entirely exempt from danger.

A. Vassard. entirely exempt from danger. 7, Carlton-square, New Cross.

METALLIFEROUS MINES OF WALES.

Sir.—Previously to addressing you last week on the above sub-ject, information was conveyed to me that a valuable lode of hemaject, information was conveyed to me that a valuable lode of hematite iron ore had been discovered in this county, but, being somewhat sceptical, I hesitated to notice the report in the Journal, lest the alleged fact might turn out to be "a mare's nest." On Monday last, however, specimens of the lode were brought to this town by an individual of thoroughly reliable integrity; he saw the stone in the rock, had it broken under his eye, put the specimens into his bag, and, as he alleges, never lost sight of the bag until he placed it in my hands. It contained magnificent stones of hematite iron ore, and the lode is said to be of immense size. I send one specimen to your office, although I am not at liberty to give the exact site from whence it was taken; suffice it to say that I know the spot. I have not the remotest pecuniary interest in it, yet I think that the mere whence it was taken; samee it to say that I know the spot. I have not the remotest pecuniary interest in it, yet I think that the mere announcement of the discovery will tend still further to prove how valuable, how little appreciated, and how partly-explored is this ancient seat of mineral wealth, whilst it justifies still more the importance of the attention which you have so ably drawn to its ore denotified.

The tide of popular favour which is gradually, yet with considerable vigour, setting in for Welsh or home mining will, if the public is guided by facts and data to be obtained from reliable sources, uninfluenced by self-interest, do more to concentrate capital and keep influenced by self-interest, do more to concentrate capital and keep it at home, and, hence, out of the laps of my lady "Emma" and other such like over-vaunted distant fascinations, than even the discontent, disappointments, and ruin which arise periodically to influence these out-of-reach speculations; nevertheless, indiscriminate mining, even at home, must end, except in very exceptional cases, in losses, and it does not do to over-rate even the best and most promising concerns; but I opine that although the Principality has been mined from time immemorial, yet splendid mining properties, partly or wholly unexplored, are available in the hills and dales of Cambria, the development of which will be adding to our national industrial wealth, and that under our very noses. Prizes like the Van, even in this age, turn up to reward the enterprise and capital industrial wealth, and that under our very noses. Prizes like the Van, even in this age, turn up to reward the enterprise and capital brought to bear on scientific development. All modern research tends to confirm the fact that "Nature's resources are by no means exhausted," and if the present growing spirit of home enterprise is only fairly looked at by the landed proprietors, who should be expected to give encouragement in dues where an integrity of purpose is displayed to work home mining ground with the appliances of modern mining adventure, I feel satisfied, Sir, your repeated efforts to encourage home, as against foreign, mineral development will presently be eminently successful. to encourage home, as against foreign, mineral development w presently be eminently successful. Aberystwith, Oct. 30.

PRACTICAL MINING-SUGGESTIONS TO AGENTS-No. II.

PRACTICAL MINING—SUGGESTIONS TO AGENTS—No. II.

Str.—I last week asked, will metallic mines pay? I say they will not in Cornwall or Devon, under the old system of management. Will they pay with a new system of working them? I arrue that they will, if two out of every three mines now in the call-paying list were to be abandoned. They are on worthless lodes, and the system of working them is bad. I am open to tell the world for why: a lounger, prowling about, thinking to live by his without work, gets a grant of a piece of ground. He finds someone of his own class to write reports on it: if he gives a good report that will do. He gets at times a pound or two for it, and trusts for the rest to chance, or a portion of free shares. To do this they employ a broker: he will write whatever they choose, and lugs in every once-good mine within 20 miles of the sett; he will even stretch a few miles further, to embrace the Devon Consols. Then they go to some town with this flash report, and if they do, as one of them once told me, catch a fool for 10006, that is all they want. They get some broker, who is ever on the look out for such work, and what the lounger has not got in they try to put in. If that does not quickly ignite they apply to the Mayor of — to fan it into a blaze. Then there is, I may say, a new grant, in all but virgin ground, often shown on a plan purposely made exhibiting every once productive lode within a reasonable distance passing through the grant. But not one of them has even a pit on it. Some may have a few pits, or even a lode or two, shown in them. Then a call is made of from 20,0006 to 60,0006. To make a great show an engine must be purchased, and the engine-shaft pitched at once, office, smiths' and carpenters' shops, and stamps or grinder erected to dress the ores. The shaft is pushed down with all speed; the reports are issued week after week, stating that they are sure to find the golden fleece in depth.

office, smiths' and carpenters' shops, and stamps or grinder erected to dress the ores. The shaft is pushed down with all speed: the reports are issued week after week, stating that they are sure to find the golden fleece in depth.

I know many of the class of men who venture in mines that believe it is all but a certainty to prove correct if they get below the first 100 fms. deep they are sure to find the fleece. There are adventurers and fools who are dragged on by what I call loungers, and in many places working down to the second hundred fathoms in depth, with not a level thrown out 20 fms. either way. I have known many of these men so in haste to pitch and sink the engine-shaft without pits or trenching on the ground to prove the ground and show a lode, and many times have I known them sink their shafts over the back of the lode. I may some day point them out. Now, I say here is a promising sett never trenched: they know of shaft without pits or trenching on the ground to prove the ground and show a lode, and many times have I known them sink their shafts over the back of the lode. I may some day point them out. Now, I say here is a promising sett never trenched: they know of but one, or at most two, lodes, though their plans may show ten or more. They have no proof of a single cross lode, caunter, or elvan, for want of through trenching first, and laying it down on paper as a guide to work by. They sink what may be fairly termed a peephole to 50, 80, or even 100 fms, deep. They are then as far from the golden fleece as ever. Then an alarm is raised, the money is all expended. A passer by tells some of the shareholders that they have spent only 5000% or 6000% on the mine, and 20,000% was collected. What became of the rest? Then it leaks out that the promoters had many thousands for bringing it out, and a vast number of free shares. Then it or eight committemen, or so-called direct moters and many thousands for oringing it out, and a vast number of free shares. Then six or eight committemen, or so-called directors, had 10000, and a lot of free shares given them. This class of men are quite up to cooking the goose, or accounts. Who has not heard of plenty of these things of late, even in this county, where heard of pienty of these taings of late, even in this councy, when they leave back even four months cost, and charge many tons of tin unsold, and not unlikely still unraised. Then what surety have honest adventurers got for their money? They have been gulled by loungers as fools. I might even say worse. Then the honest adventurers say they will fall back on them and their free shares. They forget that they are in the hands of sharpers: the shares they They forget that they are in the hands of stangers, the shades turned into money long since, sold to someone they knew had recently had a windfall. They tell him they are pressed for money, from unexpected causes, and are ready to dispose of their interest in a most valuable mine below half the selling price; and he, supposing it a bargain, jumps at them; these original men quickly supposed the second property of the property to be property to the public bursts. retire, and are gone no one knows where, before the bubble bursts. These men have often M.P., Colonel, Captain, or a string of capital

retire, and are gone no one knows where, before the bubble bursts. These men have often M.P., Colonel, Captain, or a string of capital letters attached to their names. Then the broker is often gone, or outlawed, or not worth powder. The mine is wound-up in Court, or sold as a going bargain. The expenses absord the value of the materials. The real advanturers, and even the free shareholders, are minus every shilling they paid, and even much more.

I am bound to tell mining captains that they are bound for the future to find paying mines. To do this they must know how and where to look for lodes and ore, and find them too. Befere giving my remarks on the future I will just glance at the past, as far back as the last 50 years. I feel an interest in reading mine captains reports generally. The majority of them hold it to be a certainty that if they sink deep they will find paying ore. To me this is a great mistake. Then, what have they done for the last 60 years? Why, I am ready to admit, found more copper ore than was ever found in Cornwall before from the time of the creation. Then, how did they find it? The late John Williams, Esq., discovered good paying copper in a white pan of killas; he went to the next, and the next, until he had found and worked nearly every pan of white killas he found in the county. He worked them to about the 100 fathom level, and then stopped. This opened the eyes of others, and a few of them got a share of the pence, but he was winner of

the game. When they had nearly finished up these places men were all but mining mad. They began to mine anywhere, if a lode were to be found; and in many they discovered great deposits of copper. But, I may ask, where were they mining? In a tract of land that was saturated with copper. The rock was so charged that it was even driven up to find a resting place; and at the majority of the intersections in quantity even beyond what John Williams, Esq. found in his white pans. He found one good mine out of every three. The more recent miners, I may say, find only one in thirty Mining is a very good thing for employment, not only in the mining districts, but in all the arts; but mining, as a whole, in Cornwall and Devon will die in debt were the balance to be struck. From Mr. Williams's time to the present day mining has never been carried.

on with anything to guide but the outcrops of anciently worke lodes, or a mere chance of finding a lode.

I have said before that miners are now just in the position that the English farmer was in the days of Napoleon I. When they had 3!, per bushel for corn they are nothing but barley bread and bacon. When corn dropped below 1!, their rent and land rose 100 per cent. This certainly does amount strange, but it is true. I consider the This certainly does appear strange, but it is true. I consider the miner to be in the same position now that the farmer was in at the finish of Napoleon's days. He certainly has a better chance now, as he can emigrate. The land and rents rose consequent on his imas he can emigrate. The land and rents rose consequent on his improvements. Now what is wanted is for the miner to follow the example of the farmer, and improve his knowledge and his mode of working mines, so as to keep pace with him, whose selling prices are not now equal to what they were in the first Napoleon's time, The majority of the farmers then walked to the fair and market, and their daughters cooked the dinner, milked the cows, and spun yarn. I may ask what they do now but play the piano and wear ditty chiragons? irty chignons ?

I will say no more on farming, but ask the miner to come out and keep pace with even the Cornish farmer. I will not tell the Cornish farmer why he did not get on in Bonaparte's day, but I will tell the miner what he has been doing through the last 40 years; he has run away with a notion of his own, we will sink deep to find the golden fleece; to do this he works without knowledge or guide. He has too often head drawn in for a few pounds can to aid in the as too often been drawn in for a few pounds gain to aid in the rickery of others; his hobby has ever been to sink deeper, and I beeve he thought himself right to carry out this he sunk an enginelieve he thought himself right to carry out this he sunk an engine-shaft whenever he saw a large lode; he paid but little attention to the stratum, its contents, or cross lode, elvans, killas, or caunter. He has reported for the last 40 years that the stratum was highly mineralised. He never told the public what it was mineralised with, or if it was anything that would aid in the formation of the ore he was looking after. I may excuse him, supposing he did not know, or want to; his hobby was to burn coals and get his shaft below the 100 level. Well then, I have only to tell him—I may as well say them—for they are found by hundreds, that have sunk these deep holes, and lost all, or three-quarters, of the money, and but a few of them ever lengthened out the mine 100 fathoms; all these works may be looked on as only money wasted.

may be looked on as only money wasted.

I will next take them on their own hobby of deep sinking. Every real practical, though a miner, should know that if he planted his corn, potatoes, turnips, or even trees, too deep nothing came of it. This should confirm him that everything in creation should grow in a certain fashion. Trees or fruit will grow but to a certain height above the sea, neither will wheat or any kind of grain, and we see a certain fashion. Trees or fruit will grow but to a certain height above the sea, neither will wheat or any kind of grain, and we see that we must not place them down too far in the earth; but when we come to metals man need hardly be a wizard to discover that the minerals begin with the surface and die out as they go down, precisely as the earth's produce dies out as it goes up. The very fishes of the sea tell man that they abound in shallow seas, not in deep seas. Then look at the metals—iron, manganese, lead, antimony, and all the minerals abound near the surface, and are ever found to die out as they go deeper. Then I will take copper. I have never seen a good copper mine but what showed copper near up at some point, or with a good gossan to indicate it. Then we may notice some kinds of trees grow higher up than others, or even outs or turnips a deal higher than wheat. We may just suppose copper to take about the fashion down as oats and the pine tree do above. Then we have the tin to come after. The seed of tin, gold, and tungsten was all grown in granite, and the lowest metals down. They are the finishing things for the use of mankind, just as scrub-trees grow on the hill-side of the Alpine and other mountains. This may appear strange to mining men, but I am certain it is true law of nature. These things will go down as far as man's limits are in the earth, and that some day may be attained to just the height to which the man can climb above. I am open to admit that at some points ore will go down 100 fms. deeper than at others, or even 200 fms.

I may take Dolcoath for an example. Here are great masterly lodes and cross lodes glutted with ores; why was it glutted? because the lodes and rocks are congenial to the seed sown. There they have the polarity or electrical force, ever propelling on atoms to meet all these lodes in the right direction, and it is not unlikely they may produce ore 100 fms. below the average of the ore-producing lodes in the county. All things were produced for the use of God's cre

in the county. All things were produced for the use of God's creation, and ores more particularly for man, but are useless below the limits man could go after them. Then, I say nothing of minerals, as they form shallow. I may be asked what is formed in granite. I say nothing was formed in granite but what was formed from oxide. Copper is altogether out of place in granite, it is only a more recent formation carried down from atoms from the clay-slate. Tin was formed before carbon, arsenic, or sulphur formed.

I have accused our mine captains of advocating deep sinking, not Mr. Williams, but miners who have lived at a more recent date. I do not say a mine over 100 fms. deep, with a good course of ore in the bottom, should be stopped at that depth; but I do say when a mine is stopped from not paying cost let it stop for the next generation. Dolcoath has the meeting of granite to aid it. Let the present generation stop all mines that are not working at a profit at about the 100 fm. level. Profitable copper mines are those that are found shallow, and there is ample room left yet to search and find others. To show this, I have only to ask the deep sinkers how much of the public money they have wasted in deep sinking, and to tell of the public money they have wasted in deep sinking, and to tell me of every deep mine sett they have worked within the last 50 years that ever half paid expenses? The Messrs, Taylor left the county unat ever half paid expenses? The Messrs, Taylor left the county from losing so much money in opening old deep sunk mines. What has Great Wheal Vor, Crenver, or Wheal Abraham done, mines that were the flower of the county when shallow? Then, see the Alfords, and 50 others that produced ore by thousands of tons shallow. If these do not make ore in depth, what explanation can the deep sinkers give of the millions of money they have wasted in Cornwall? Devon Consols, I may say, was thought would be the monster of the earth deep but I must denythis; it is not deep, and I never thought. earth deep, but I must deny this; it is not deep, and I never thought so; it will not now average much over 100 fathoms below sea level. Will they find paying tin? I hope they will. I passed through it a short time since; it is quite a forlorn place, not a sound of music was to be heard. I have published my report on it twice. They were angry at it; perhaps they thought me too severe when I gave it. Will they publish it now. They may, as I found them good-natured fellows. Then, I take Wheal Friendship. For over the space of forty years this mine was the great gun of Devon, but it has withered out and died in depth. I might mention 50 other mines, but I never saw a deep mine stop with a paying bottom, if dependent on it.

In my next I shall take up the other side, and try to rally the Coris a plant take up the other side, and try to rany the con-nish captains, and tell them they must be Cornishmen, and make a long pull and a strong pull, and try to keep pace with the Cornish farmer, and double the value of the mining property in the county in the next 50 years, as the farmers have their property. It they cannot do this they had better emigrate, and let the county rear a new set of free thinkers, not deep sinkers, as I do not despair yet. I believe there are hundreds of young mines to be found in the county, and will be found, to pay dividends shallow. In my next I will give my plan as to how to find them.

omitted to remark on the two great guns near Camborne-Dolcoath and Tineroft. They were not old abandoned mines, but I must ask if the dividends they have declared since the rise of tin are equal to that rise, taking it to be only 30% per ton? If not they would have been losing mines but for the late God-send. Anyone knowing the

number of tons raised since the sudden rise of tin, and the paid, can soon tell what the result would have been it they be got up the last lot of tin. I sold many tons from Drake W. carried it to St. Austell, and sold it for 33. per ton, no callowed. Mr. Richard Tredinnick is the most likely man Is.

What should a good tin granite contain—what portion felspar, mica, and schorl? What is granite composed points where copper is found in it? What quantity What quantity of points where copper is found in it? What quantity of silinania, iron, mica, and sulphur should a good copper-bearing letain to produce yellow copper ore in a lode in killas? What contents of slate rock that produce grey copper in quantity: are the contents of a slate rock that produce blue lead in quantity. Zinc and black jack are found in lead lodes and copper-lodes bulk is found in lead-bearing rocks and Iodes. What is thence in the contents of the copper-bearing rock and the lead rock, the zinc being found in each? What forms gossan on of a lode—where does it come from? What are the contents and back of a good yellow copper ore lode? What for a goss back of a grey copper lode? What for a gossan back producin oxide and carbonate? What shifts lodes? When were they It is said the lodes on the east side of the cross lode shift so me it is more likely the west portion shifted north? It is said the lodes on the east portion shifted north: Or, if each shift a portion each way? Wadebridge, Oct. 26.

PRACTICAL MINING—SUGGESTIONS TO AGENTS,

Sir,-In reading Mr. N. Ennor's elaborate letter in last S. Mining Journal on Practical Mining, I am much please a combination of practical and sound sense. It is evident remarks Mr. Ennor must have had a vast amount of expe remarks Mr. Ennor must have had a vast amount of experit will be well for mining agents to listen to such valuable before embarking in an outlay of thousands, and I may su thousands, of public money, as the result of the last five y justify. I hope that some well-informed practical mine age answer the latter part of Mr. Enner's letter, and prove that sent generation can boast of some men whose intellect ha with the use of pick and gad. There is no doubt that such as Mr. Ennor is about to publish on Mining Laws will I great advantage to the rising generation, as Mr. Ennor havantage of combining practice with theory. It is quite of the vast amount of capital lost in mines that the majority agents are deficient in all but the theory and practice of its

agents are deficient in all but the theory and practice of in Having recently taken a tour through the mining di Cornwall, I hear numerous complaints about the supplies rials, and particularly that of coals to mines. In all wellmines, where pursers are free from the control of mercha adventurer has some chance, as there is a saving in the latte of at least 30 per cent. by importing coals. To induce the of at least 50 per cent. by importing coals. To induce the tenture to embark in Cornish mines the landowners will do be more liberal in their dues, as I find they are most exorbiblind to their own interest, as well as unjust to the public.

- AN ADVENTURER IN Mr Plymouth, Oct. 27.

SILVER ORES, AND THEIR MODES OF REDUCTION.

Str.—I have just stumbled upon a copy of an excellent arise the treatment of silver ores written by my friend and predec Mr. W. T. Rickard, F.C.S. Thinking it a paper of sterling ment one calculated to afford instruction and interest at the present when the precious metals are being so zealously sought f best modes of working them afford so much consideration you a copy for publication. Of Mr. Rickard's well-known you a copy for publication. Of Mr. Rickard's well-l treat such a subject exhaustively I need say nothing. in mining and assaying has given him renown in both hand I feel confident he will thank me for furnishing this abilities to the readers of the Mining Journal. W. Libertory and Assay Office, 25, Finshury place, E.C., Oct. 28.

SILVER ORES, AND THEIR MODES OF REDUCTION.

Before entering on the question of silver ores, it may be a take a brief glance at the history of the metal itself, with it properties (mechanical and chemical), and compounds, sati ing the nature and peculiarities of silver we may better the various methods adopted to liberate it from the numer ralising agents by which it is disguised and imprisoned in the ral kingdom. Silver has been known and used as money fivery earliest days of antiquity, and is frequently mentione Holy Scriptures, where the first notice of it appears in the 20th of Geneals, 16th verse—wherein Abimelech, addressing Sara wife of Abraham, says: "Behold, I have given thy brother a the pieces of silver," and at a later period of the world's history that it was 30 pieces of silver which tempted the traitor Jusbetray his Master.

There can be no doubt but that silver has been know

both China and Peru from time immemorial. In the latter on on the arrival of Pizarro, silver and gold were almost the only known to the natives, and, according to Prescott, the Spaniar selves were on several occasions obliged to use silver in sho horses! Even up to the present day vessels used for the horses! Even up to the present day vessels used for the me domestic purposes are made of silver in both Peru and Chil metal being considered cheaper, in the end, than earthenware orcelain, at the high prices hitherto attached to imported are these manufactures.

Very little is known of the methods anciently adopted eit China or South America for the working of mines and minen in Spain we have evidences (in the vast excavations of the Almagera and the enormous mounds of ancient scoria on the of the Mediterranean near this locality) that in the sarliests authentic history this was one of the countries most cele the production of gold and silver, especially the latter. I cians and Carthagenians are said, indeed, to have freighted with these metals, and even to have formed their anche. On the subject of ancient mining in Spain, a Spainsh Nicasio Anton Valle, states as follows: "The Emperor Vained annually from Gallicia, the Asturias, and Lusitani (or 30 tons) of gold, as we are informed by Pliny, who quantity of gold in these sites, particularly the Asturias, for Spain was found in such quantity that according

of Spain was found in such quantity that, according to author, Hannibal, in a mine worked by him near Carl tracted daily a quantity which exceeded 30,000 rials (8 money). Cato delivered into the Treasury 25,000 lbs. (1) silver in bars, and \$120,000 in money, besides 400 lbs.

of which he had accumulated in Spain."

There is no reason to doubt the correctness of these and

oth from the result of modern discoveries of silver in S both from the result of modern discoveries of silver in imperishable marks which Roman and Carthagenian m in that country. The immense excavations and mour prove not only the extent to which these metallurgic were carried, but also that smelting was the process of the country Within the last few years most of these mounds of the these mo ope that

12th and 16th centuries there sprung up in Europe tha industrious class of beings, the alchemists, to whom, ing all their delusions and impostures, modern chemi than is generally believed. One of their most favour study and laborious experiment was the production the base metals by transmutation. Salt, sulphur, and in the materials of which they believed silver to be com-somewhat singular coincidence that these same substanociated in the most approved methods of reducing the present day. Although the glittering prize eluded and their fiery labours in their subterranean laboratorie sulted in disappointment, poverty, disease, or death, their forts at new combinations of matter, in order to achieve desideratum, led to the discovery of some of the most acids and salts with which we are acquainted, and so part and furnished the materials for the gigantic and brilliant di of modern times.

Strange as it may appear in these days of scientific purace of alchemists is not yet extinct; and, stranger still

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was about offering to manufacture for this Government. In the name of the company the time of about \$60,000. He was not heard of till two years the time of about \$60,000. He was not heard of till two years the time of the turned up again in New York, with a patent bell, eclipsing everything of the kind hitherto known, and which was about offering to manufacture for this Government. In the meanwhile, and until the alchemists of the 19th century hall deign to communicate to the world a method of procuring silver rartificial means, we must rely on those sources provided by nature ratificial means, and which appear now as abundant as when the mineral kingdom, and which appear now as abundant as when the continent was first discovered by Columbus, notwithstanding benormous quantities of silver extracted from the mines of Mexico alsouth America since that period. At the present time about resixths of the silver produced throughout the world is extracted on the mines of that continent, the countries supplying it being hall, Peru, Mexico, Nevada, and Bolivia.

In Europe the principal mines are those of Spain, Norway, Saxony,

resiths of the silver produced throughout he would be extracted and the mines of that continent, the countries supplying it being shil, Feru, Mexico, Nevada, and Bolivia.

In Europe the principal mines are those of Spain, Norway, Saxony, Hartz, Austria, Russia, and the galena mines of England and siles. In 1850, the total amount of silver produced in Europe, Asia, and Africa was 463,742 lbs. troy, while North and South America siled 2,199,644 lbs. troy. I have not been able to obtain reliable nistics of a later date, but the addition of the produce of the Comparison of the western hemisphere very largely. Metallic silver its lives ince that period must have increased the aggregate propertion of the western hemisphere very largely. Metallic silver its lating in various forms of the cubic, octahedral, and in the metal is precipitated by another metal from its acid solution. Silver is harder than gold, but softer than copper; it is elastic, its a clear ringing sound when used for musical instruments, and very malleable and ductile—it may be hammered into leaves of the may be drawn into a wire 400 feet long.

The specific gravity of fused silver is 10-44, and that of hammered 1057, or 104 times as heavy as water. It is distinguished from all ther metals by its brilliant white colour and a lustre which does not tarnish in the air unless sulphuretted vapours are present. It miles at temperature of 1873° Fahr., or 1000° of the air thermometer, which is a white heat, at which temperature it gradually continued to the surface with charcoal dust.

Silver may be welded when in the pulverulent state by the same moves as a that adopted for welding platinum, and, like water, it possesses the property of expanding as it solidifies, which may be a serile by a piece of solid silver floating on the surface of the melted serbing oxygen in the same loose way as water takes up various gases.

erred by a piece of solid silver floating on the surface of the melted al. While in the melted state it possesses the property of abbing oxygen in the same loose way as water takes up various gases, takes place when silver is fused in the air or under a small quantof nitre. The absorbed oxygen (to the amount of 22 times the me of the metal) escapes as the metal solidifies, and may be ested over water; if, in consequence of rapid cooling, the surface he silver solidifies before the oxygen has escaped from the interior, gas bursts the superficial crust and drives out part of the melted er in globules and excressences. This effect is called the spitting ilver, and is frequently a source of trouble and error in the hands mateurs and inexperienced or careless assayers. ateurs and inexperienced or careless assayers.

In the form of fused nitrate, silver is used in surgery as a cautery; is also used internally in certain forms of epilepsy, but it is a magerous remedy and should be administered with great prudence. as who have taken this medicine should avoid exposure to the of day until the salt of silver which is distributed throughout hole organism has been carried off. Without this precaution, a parts of the body exposed to light turn blue in consequence

all the parts of the body exposed to light turn blue in consequence of the decomposition of the salt of silver in the subcutaneous tissue. With oxygen, silver forms three compounds, viz.: the subcvide, the protoxide, and the binoxide. The protoxide is the only oxide of silver possessing any interest, as being the base of all the ordinary salts of silver; as a base it is exceedingly powerful, combining with even the weakest acids, and perfectly neutralising powerful acids as regards their action on coloured reagents.

The soluble salts of silver are obtained by dissolving the carbonate of silver in acids, while those that are insoluble are precipitated from the nitrate by double decomposition, as illustrated by the following experiments:—1. Protoxide precipitated by potash.—2. Sulphide precipitated by sulphide of ammonia.—3. Chloride precipitated by salt.—1. Iodide precipitated by jodide of potassium.—5. Chromate precipitated by chromate of potash.—6. Phosphate precipitated by browners is obtained are very numerous, and often so intermixed with each other, and with ores of other metals, as to cause much trouble and perplexity in their metals, as to cause much trouble and perplexity obtained are very numerous, and often so intermixed with each other, and with ores of other metals, as to cause much trouble and perplexity in their metallurgical treatment. To this intermixture may be attributed the enormous loss in the reduction of silver from its ores—30 per cent. being the average loss in Nevada by the most improved mode of working, while in Peru, by the patio system, it frequently exceeds 50 per cent. The ores mostly worked are those of native silver, antimonial silver, are native and black subthides, and the chloride or horn

silver, antimonial silver, arsenical silver, antimonial sulphide or ruby silver, the grey, red, and black sulphides, and the chloride or horn silver. In addition to these considerable quantities of silver are obtained from galenas and copper ores; indeed the galenas of England have rarely been found altogether free from silver.

Native silver is found in almost all silver mines in larger or smaller proportions, associated with the mineralised metal. It sometimes occurs crystallised in wedge-form octohedrons, in cubes and cube octohedrons. At other times it is found in dendritic or arborescent shapes, resulting from minute crystals emplanted upon each other. But more usually it presents itself in small grains without determinable form, or in amorphous masses of various magnitude. At but more usually it presents itself in small grains without determinable form, or in amorphous masses of various magnitude. At Present it is found in the greatest abundance in the mines of Charnacillo, near Copiapo in Chili, and at Kongsberg in Norway. In the United States very elegant specimens are associated with the native typer at Lake Superior. The silver generally penetrates the copper in masses and strings, and is nearly pure, notwithstanding the copper

cho, near Copiapo in Chill, and at Rongsberg in Norway. In the United States very elegant specimens are associated with the native copper at Lake Superior. The silver generally penetrates the copper in masses and strings, and is nearly pure, notwithstanding the copper in which it is enveloped. Antimonial silver is of a yellowish blue colour, and is very brittle, with a high specific gravity 9.5, it is known by its lamellar fracture, and when pure contains 84 per cent. of silver and 16 per cent. of antimony. The mixed antimonial and arsenical ore of silver is much more abundant than the pure antimonial; its constituents are silver 16, iron 44, arsenic 35, and antimony 5. Raby silver is remarkable for its lustre, colour, and variety of forms. It is friable, easily cut with a knife, and affords a powder of a lively crimson red. Its colour in mass is brilliant red, dark red, or even metallic reddish black. It crystallises in a variety of forms. Its constituents are silver, from 56 to 62; antimony, from 16 to 20; sulphur, 11 to 14; and oxygen, 8 to 10. The antimony being in a state of a purple oxide in this ore is considered to be its colouring principle. Like native silver it is found more or less in almost all silver mines, but is met with in the greatest abundance at Frieberg, in Chill, Pern and Maria. mines, but is met with in the greatest abundance at Frieberg, in Chili, Peru, and Mexico. Only a few isolated specimens of it have been found in the Comstock Lode. The sulphide of silver is of a dark grey or leaden hue, slightly metallic, and easily cut with a knife, when it betrays a metallic lustre. It consists of 13 of sulphur and 87 per cent. of silver. It occurs crystallised in most silver mines, but is especially abundant in those of Frieberg, Bohamia, Hungary. The strays a metallic discrete crystallised in most suver much of percent, of silver. It occurs crystallised in most suver much but is especially abundant in those of Frieberg, Bohemia, Hungary, but is especially abundant in those of Frieberg, Bohemia, Hungary, Maxico, and Nevada; this, with the black sulphide, being the chief

ore in the Comstock Lode. The black sulphide is of a sooty blackness, soiling the fingers, brittle, and cellular. It is found abundantly in Peru and Mexico, and is called Negrillo by the Spaniards. The red ness, soiling the fingers, brittle, and cellular. It is found abundantly in Peru and Mexico, and is called Negrillo by the Spaniards. The red sulphide is a somewhat rare ore; its composition closely resembles the black and grey varieties, containing from 84 to 86 per cent. of silver. It is of a light scarlet or cerece colour, and is sometimes denominated the light-red silver ore, to distinguish it from the dark-red antimonial sulphide of silver. The chloride or horn silver is semi-transparent, and of a yellowish or greenish aspect, giving off a peculiar odour resembling decayed cheese, when freshly taken from the mine. It is so soft that it may be cut with the nail, and may be easily recognised by its peculiar horny or waxy aspect. It melts in the flame of a candle, and is reduced to the metallic state easier than any other mineralised ore of silver, simple fusion with metallic iron or an alkaline carbonate being sufficient to reduce it. It also amalgamates with mercury with great facility, and gives up its silver within a very small percentage of its assay value. It is abundant in Chili and Peru, most of the Chilian silver being obtained from this ore. It has lately been found in the Kearsarge and San Antonio districts; it consists of 753 per cent. of silver, and 247 per cent. of chlorine. In reducing by means of amalgamation, with the exception of ores of native silver and chloride, all the other ores of silver must be converted into chloride by one method or another before satisfactory results can ensue—those portions of ore which resist or escape the chlorinising process are unacted on by the mercury, and are too frequently lost in the tailings. In Chili, where the chloride is satisfactory results can ensue—those portions of ore which result or escape the chlorinising process are unacted on by the mercury, and are too frequently lost in the tailings. In Chili, where the chloride is often largely mixed with antimonial and arsenical ores of silver, it is the custom to ship the tailings or relaves to Swansea or elsewhere, for furnace treatment after all the silver from the natural chloride has been extracted by amalgamation.

The methods by which silver is extracted from these ores are almost as numerous as the oversthemselves, and in order to decide on the

as numerous as the ores themselves, and in order to decide on the best and most economical mode of reducing any particular ore, the first step is obviously to obtain, by chemical analysis, an accurate knowledge of its constituents, the character and amount of its stony matrix or gangue, and particularly the mineralising agents in com-bination with the silver. Possessed of this knowledge, the intelli-gent miner or mill owner holds the key to the solution of the question of treatment in reduction. With a practical acquaintance with the fact that perfect amalgamation can only be obtained from ores of the chloride or native silver, imperfect and wasteful amalgama-tion from unroasted sulphides, and no amalgamation at all from the arsenical, antimonial, cupreous or plumbiferous ores of silver, he is enabled at a glance to decide whether his ore can be most advan-tageously treated by the furnace or the amalgamator, or the two processes in combination—such as calcining before amalgamation, or where much chloride or native silver exists first extracting all susceptible of amalgamation, and afterwards smelting the tailings with lead, or submitting them to calcination and the chlorinising

action of salt previous to re-amalgamation.

With an analysis of his ore before him, the metallurgist knows that carbon must be added, should the metal be found to exist in the state of oxide, in order to reduce it to the metallic state. When sulphur is found to be the mineralising agent, it suggests the necessity of adding some substance which has a greater affinity for it than silver—such as lime or iron, if the reduction is to be effected by fire or antimony is found in combination with silver, it is hopeless to expect any results from amalgamation without previous calcination and chlorinisation with salt. When lead or copper is found to exist in paying proportions theore must be treated for those metals, and, as the silver accompanies them through all their various stages of exclusive it is expected.

in paying proportions theore must be treated for those metals, and, as the silver accompanies them through all their various stages of reduction, it is separated by a subsequent process.

The methods at present in use for the reduction of silver may be divided under five heads, each of which may be modified by the proportion of foreign matter present in the ore, cost of fuel, or mercury, or other circumstances. The first, and simplest, is that of smelting the native and chloride ores with an alkaline flux, in black-lead crucibles. The rich sulphides may also be treated by this method by the addition of metallic iron, to remove the sulphur. By this process I have succeeded in reducing rich specimens of sulphides within 2 per cent. of their assay value. The second process is that of amalgamating the native or chloride ores when too poor; that is, containing too much gangue or earthy matter to admit of their being economically smelted per se. The sulphides are also imperfectly reduced by this method, as practised by the patio system in Mexico and Peru, and the amalgamating pans of Nevada.

The first operation, in this process, is to grind the ore to an impalpable powder by means of stamps, trapiches, arastras, or any other mechanical contrivance that will insure a perfectly impalpable powder, as amalgamation will not take place till the ore has been reduced to this condition, and many serious failures have resulted from the neglect of this very essential point. If the patio system is to be adopted the ore is spread out in the condition of a soft mud, on a paved floor, called by the Spaniards the patio (or circo, when of a round shape), as at the mines of Cerro de Pasco, in Peru. Mercury is then filtered into it by means of straining through a cloth, and at the same time scattering it over the entire surface of the patio (or circo), which at Cerro de Pasco is 39 feet in diameter, and contains

the same time scattering it over the entire surface of the patio (or ciro), which at Cerro de Pasco is 39 feet in diameter, and contains 18 to 20 tons of ore to the charge, and lays about 4 in. thick on the floor. Salt and magistral (or sulphate of copper) are then introduced in solution, in proportion (like the mercury) regulated by the quality of the ore being operated on, and the whole incorporated by being trodden in by men or horses, for six or eight hours per day, till amalgamation takes place, which is usually 30 days in summer, and often as many as 90 days in winter.

[To be continued in next week's Mining Journal.]

AMERICAN MINING.

AMERICAN MINING.

Sir,—It would be worse than useless to probe a wound for the purpose of merely inflicting torture by reminding men of their past follies. But if errors are easily forgotten they may soon be repeated, and the light which proves an error should demonstate the truth opposed; otherwise, the alternative of error might be error still. Inertia belongs not to organised life, nor indeed to any particle of matter comprised in our mundane system, much less does it appertain to man, who, of all the tribes of animated existence, is actuated by, and can lay claim to, the spirit of enterprise, as belonging exclusively to his race. But motion is an attribute of matter throughout universal nature, and inertness, therefore, can be but a relative out universal nature, and inertness, therefore, can be but a relative term. All things move; the great conservative principle, or force in nature, is motion; when motions ceases death ensues—or rather death itself is but a reversion of the mechanism of motion; it still goes on. But what has this to do with mining, it may be asked, either in America or elsewhere, as neither philosophy or morals is very generally considered to be within the sphere of mining. That this is a mistake need only be indicated to be cordially accepted, as both philosophy and morals have largely to do with the success of both philosophy and morals have largely to do with the success of mining. The spirit of enterprise inherent in man impels to action, which, if allowed to be heated by enthusiasm, instead of controlled by reason, is as likely to pursue a course hostile to its own interests as it is one which would be promotive of them. The pursuit of objects in the dark involves great uncertainty as to their attainment. So does embarking in mining without due deliberation and forethought. If there are not real and substantial land marks to guide one in the pursuit, it is like launching a frail bark in the night on a boisterous sea without chart, compass, or rudder to guide and direct its course.

its course.

There is nothing more impetuous than a human avalanche, nor anything more devoid of reason; the most elevated part of the plan of speculative enthusiasm is mania, and speculative mining has too often culminated in such a climax, and from whence an equally forcible and rapid reaction is precipitated, as impetuous in its recession as it was in its advancement, and equally mechanical, as well as being independent of and unsusceptible to rational control. The recent rush for American mines is a memorable example of over-wrought enthusiasm. Hundreds of thousands of pounds sterling were spoken of as familiarly as pounds, shillings and pence are under ordinary circumstances, and every extravagant assertion re-garding the value of the mines offered for sale on the English market,

even as reported by the vendors themselves and their accomplices, seems to have been accepted as confidingly as if they were incontestibly demonstrated truths. The bona fides of the mines themselves seems never to have been an engrossing question, but apparently such an idea was crowded out of consideration by a preposers of the contest of the conte sessing desire to participate in such fabulously reputed sources of wealth. If mining in its practical and speculative branches does not require thought and the exercise of reason it would be difficult to conjecture to what thought can legitimately apply, and where or conjecture to what thought can legitimately apply, and where or what is the province of reason. Speculative mining is facile, and may easily be degraded to the level of a lottery by those whose interest it may be to degrade it to that position. And the frequency with which that is done has given rise, and some sort of popularity, to the idea that all mining in its commercial relations is a species of gambling, and in its practical pursuit an absolute chance speculation. That such a notion should be entertained by its numerous blind pursuers is not to be wondered at but thet it should be so reblind pursuers is not to be wondered at, but that it should be so re-garded by thoughtful men is indeed surprising. The operations and effects of the great dynamic forces in the mineral kingdom are very

blind pursuers is not to be wondered at, but that it should be so regarded by thoughtful men is indeed surprising. The operations and effects of the great dynamic forces in the mineral kingdom are very frequently marked by an abruptness which conveys the impression to superficial observers that they act uncontrolled by law; but this arises merely from the fact that the senses are very often made cognisant of effects involuntarily, whilst the causes which produced them lie concealed beyond the ken of mortal vision.

Striking analogies may be traced between the three great realms of nature, especially in their arterial and venous ramifications, which parts of each individual system are found to obey a similar code of laws, and which are subservient to analogous ends. A fiction in our legal jurisprudence is that every one amenable to its provisions is supposed to know the law, no matter how illiterate a person may be, whilst in respect of natural laws it is an incontestable fact, in many instances, that they can only be inferentially traced by even the best informed observers from certain effects produced, and then too frequently in but dim and shadowy outline. As an illustration of this I may be permitted to mention the origin of metals and the formation and repletion of metalliferous veins. Whata remarkable diversity of opinion is entertained by both scientific and practical men on this subject! If the premises of each were artificially or arbitrarily constructed according to a difference of taste, of education, or aspect from different [points of view, the conclusions could not conceivably be more dissimilar. In respect of this most obscure of the three great departments of nature, men refuse to accept as true that which cannot be demonstrated either by ocular facts or experimental philosophy, whilst analogous conditions in the other departments of nature, and which are as far removed from the possibility of absolute proof as are those relating to the mineral kingdom, but which are currently accepted as true, a very likely to deceive the observer, and lead him to wrong concusions. Abnormal conditions are met with in each department of nature, but to generalise from these for practical purposes would be to invest the exceptional with the attributes of general conditions, and which, by so doing, must always terminate in anomalous results. That this has been done in respect of American mining is what I shall endeavour to show in another communication, and that most of the disasters which have occurred resulted therefrom. Llanrwst, Oct. 28, ROBERT KNAPP.

MINING IN THE LLANGUST DISTRICT.

MINING IN THE LLANRWST DISTRICT.

SIR,—Having known Nant Bwlch-yr-Haiarn, or what is now called the Llanwrst district, formany years, I have been anxiously looking forward to Capt. Knapp's reply to the question put to him by your correspondent "Cymro." I always understood that the rocks in the vicinity of the mines were underlying the fossiliferous, and I was rather surprised when I heard that fossils belonging to the Devonian system had been found in the locality, which I considered geologically to belong to the Lower Silurian. About Trefriw I know there are igneous rocks, but their constituents and textures are quite distinct from granite. I beg to thank "Cymro" for his gentlemanly letter, and to which I hope Capt. Knapp will reply satisfacfactorily, inasmuch as there are many anxious to know where the granite and fossils are found.

St. Asaph, Oct. 28.

MINING IN CORNWALL—THE SILVER LINING BEHIND THE CLOUD.

St. Asaph, Oct. 28,

SIR,-There can be no question but that the mines of Cornwall, especially those in the district in the neighbourhood of Hingston Down, contain millions of tons of arsenical mundic, high and low priced copper, and silver-lead ores. The question seems to be— where are these ores to be economically and successfully treated, so where are these ores to be economically an addressing treated, so as to be made to give up the vast amount of treasure they contain? Several parties are trying their hands at it in a small way in the neighbourhood. Drayton and Co. have several years carried on successfully the burning of mundic and the refining of a resnic at Coombe, near Harrowbarrow. Capt. Doble has been engaged for some time in extracting silver from the debris of Old Wheal Brothers, where there are apply 20 000 tone of stuff of surface surpages due our force. in extracting silver from the debris of Old Wheal Brothers, where there are some 20,000 tons of stuff at surface, supposed by our fore-fathers to be worthless, but which the magic manipulations of chemistry have proved to be "very silvery." We are glad to find that Capt. Doble has induced some capitalists to join him, and that his perseverance under difficulties is likely to be crowned with success. Our friend Barnard, of "Wheal Barnard," has been battling like a true Briton with the difficulties that often beset the path of a man when, starting away from the beaten track, he marks out a fresh course for himself, and before he has convinced the public that it is for their interest to follow in the same track. Another instance of perseverance under difficulties which, if it does not win success. of perseverance under difficulties which, if it does not win success, certainly deserves it.

But the establishment likely totally to eclipse all others of the kind

But the establishment likely totally to eclipse all others of the kind in this neighbourhood, if not in the two counties, is situated at Greenhill. We allude to the works of the West of England Fire-clay, Bitumen, and Chemical Company. This company has acquired upwards of 40 acres of freehold land, containing immense quantities of fire-clay, and this department of the works is now in full operation, under the able management of Mr. T. Westlake, whose old established fire-brick business the company have purchased, and incorporated with their own. The demand for this company's fire goods has been so great that it has been with the greatest difficulty that orders have been supplied. Various smelting-furnaces have been and are being built, and it is intended at once to commence the erection of kilns, &c., for the burning of mundic and refining arsenic. Kilns will also Sc., for the burning of mundic and refining arsenic. Kilns will also be erected for the burning of shale, the extraction of mineral oils, &c., and it is intended to carry on the manufacture of artificial manure on a large scale. The chemical and smelting departments have been designed by, and will be under the superintendence of Mr.S. H. Emmens, D.C.L., whose consummate chemical skill and untiring

Emmens, D.C.L., whose consummate chemical skill and untiring energy and perseverance are enlisted to make the affair what it deserves to be, and what we hope it will be—a splendid success. Connected with the smelting and chemical departments is a very fine chimney, or stack, that is now 170 ft. high, and which when finished will be 200 ft. high, or 30 ft. higher than anything of the kind in Cornwall. The London managers are Messrs. Emmens Brothers and Co., Old Jewry, London, and the business capabilities of these gentlemen are too well known to need any eulogy from our pen. The managers are making arrangements for ensuring a large and continuous supply of materials for carrying on the various departments, and as the East Cornwall Mineral Railway passes through the property, and close to the works, communicating also with the navigable Tamar, and several mines in the neighbourhood, some of which the company will doubtless partially, if not entirely some of which the company will doubtless partially, if not entirely

acquire, the matter of supply is placed beyond the region of probability and assumes the position of an absolute certainty. By treating the ores at Greenhill of course the returning charges of 2.1.15s. will the ores at Greenhill of course the returning charges of 2l. 15s, will be saved, besides carriage, &c. But how about coals for burning and smelting? Anyone but a mere tyro knows that mundies burn themselves after they are ignited, and when sulphur and arsenic have been extracted the residue is treated chemically. Such confidence have the managers in the success of this affair that they guarantee a dividend of 10 per cent, for five years on capital paid, up; but it is reasonably expected that the dividends will be much higher when all the various departments are in full. I wish the spirited projectors all the success they deserve. Co-operator.

MINERS' CONVERSATIONS-No. II.

Bill—So many things are dear now that poor families can have but few of the comforts of life, and not all the necessaries. Only think of coals is, 9d, per cwt., meat 10d, per lb., and potatoes 10d, per gallon.

John—I find it hard to live, I can assure you, with all the care of my wife, who is careful, indeed, and you know, Bill, that I don't spend anything, or but rarely, except that on pay-days I take a little drink, like we are now doing, and I spend a few pence per week in tobacco.

little drink, like we are now doing, and I spend a few pence per week in tobacco.

Bill—I remember when miners used to get only 50s, or 60s, per month, and they managed to live then, but how? why, on barley bread, scalded milk, and fish and potatoes; and you know we had good and cheap potatoes at that time at one-eighth of the present price. How long is it since the disease came to the potatoe?

John—It is in the year 1845, now 28 years.

Bill—Does anybody know what produced it?

John—No, nor what to call it. It was a serious calamity to the Irish, who so much depended on the potatoe for subsistence. In England, too, it was severely felt. I knew a farmer who grew annually on his farm 100l, worth of potatoes. The failure of the crop in 1845 obliged him to leave the country for Australia, where he died. His land was adapted for potatoes better than for corn. People now are not willing to live on barley bread as they did formerly, so that most of the barley is used up by the brewers of beer.

Bill—Some contend that such a use is nothing better than a waste of the corn, but you and I, and other such ones, think a little good beer useful, at least harmiess.

John—Did you ever sign the teetotal pledge?

Bill—Yes, when Mr. Teare came down to Cornwall, lecturing, in 1838, and I kept the pledge for a few months. I don't see why you and I, little-drop drinkers, should abstain entirely. It may be well for drunkards to bind themselves; men who are irresolute, but will respect a promise or engagement, if they make it—at least some will.

John—I hear that hundreds of miners have left Cornwall for the North of England coal mines, where, it is said, wages is good—about 7l. per month.

Bill—It is true; but the Unionists have circulated a hand-bill

71. per month.

Bill—It is true; but the Unionists have circulated a hand-bill Bull—It is true; but the Chionists have circulated a hand-one saying that the employer will delude them, or is deluding them, by inducing them to go up to his mine at that wage, and after the first month is over reduce it. I am not aware that any men have found it so. If Hargraves deceives the men in that way, it is very dis-

John - Wages in Cornwall is so low that miners cannot have much ef or mutton, and they, of all men, require it most, to keep up

beef or mutton, and they, of all men, require to their vigour

Bill—It will not do for miners to be vegetarians. Abstinence from animal food may suit men whose labour is light, as clerks or shopmen, and they are better with it.

John—Coal was mentioned just now as one of the dear articles in housekeeping. The coal merchants not only sell coal at a high price, but they sell water with it, without any allowance for it. Some of them pretend to sell it dry, out of a shed, but in nearly all cases that I have known it has been first exposed to rain, and thereby absorbed a great deal of moisture, which it would take a long time to discharge from it, so the purchasers pay at the rate of 1s. 9d. per cwt. for the water.

Bill-Don't you think that the public is cheated greatly in the

Bull—Don't you think that the public is cheated greatly in the weight and measure of goods?

John—Yes, and in the quality as well. Nearly everything we use, except salt, is adulterated. It would be well if some person qualified for the work would write a book on the subject, it might be called "The British Humbugs of the Nineteenth Century." There are humbugs in mines, in merchandise, in manufactures, in law, and in nearly every thing, religion included. What is a hypocrite but a personal humbug?

in nearly every thing, religion included. What is a hypocrite but a personal humbug?

Bill—Millers, you know, have always had the character for being cheats, and as few people keep weights and measures they are, I suspect, cheated more than they are aware of. A lady in Gwennap who received her flour from a mill one day weighed a small sack full brought from the mill near, and found it 6 lbs. deficient. When she mentioned it to the miller, he said, "It was a mistake, don't mention it to anyone: I will make it right."

John—If people would only occasionally test the weights and measures of goods received, the vendors would be afraid to cheat; but as they know that the check is never, or very rarely, applied they

sures of goods received, the vendors would be afraid to cheat; but as they know that the check is never, or very rarely, applied they cheat with impurity. John Bull is a great rogue.

Bill—What do you think of mine brokers?

John—Lawyers, you know, have generally been considered the greatest rogues in the world; but they are immaculate when contrasted with some of the brokers. There is some honour amongst lawyers, but none at all in bad brokers; they will cheat if they can, not only strangers, but their own fathers, mothers, brothers, and sisters; but there is one they cannot cheat; who do you think that is?

Bill—I guess you mean the Devil.

John—I do, and so surely as they go on in their course of dishonesty, so surely he will take them into his custody when they have run out their race.—St. Just, Oct. 29.

AGENT.

WHEAL VINCENT TIN MINE, ALTARNUN.
detters appear in the Supplement to the Journal of Oct. 25, and I
u to again favour me with space for the insertion of a few remarks

to again favour me with space for the insertion of a few remarks is so deficient in common sense, and is characterised by absurdities it is almost a waste of time to take any notice of it, and I should so were it not to prevent the writer from thinking he had beaten edity of this letter will at once appear when we compare the first aphs. In the first of these he expresses his doubts as tomy whereniss I must exist only in the "world of fancy," while in the last he local habitation, although he has not given to me a name. Here is yo marked that it must belovious to every reader of your valuable fak, Sir, it must be he who is living in the world of fancy, talking to being scared by ghoste, which could only be the conception of a range and the must have nothing to do with stations or trucks, so that he must no his imagination before he can determine my correct whereabouts. has also caused him to commit an error in saying "my writing uncertainties," whereas I only stated simple facts, which neither gues dare attempt to gainsay.

was couched in uncertainties," whereas I only stated simple facts, which neither he nor his colleagues dare attempt to gainsay.

The writer of letter No. I asks if it "has appeared to me that one man is not sufficient to manage the mine." I would, therefore, inform him that no such idea has occurred to me, and he must be greatly in want of the power of discrimination to come to such a conclusion from the statements made in my previous letters. I strongly adhere to my opir ion that one agent is quite sufficient to manage Wheal Vincent for the present; but if we must be saddled with the expense of two should we not, as shareholders, endeavour to secure the services of two men who would manage the mine economically, and in an efficient manner?

No. I also states that "nearly 50 tons of tin sold is a proof that the agents knew the when they saw it; here, again, the writer's fancy has led him astray, for if he will only take the trouble to refer to the reports if think he will find that the different parcels of tin credited will not amount in the aggregate to much over 40 tons. But if the stopes were so valuable as they were first represented, with the quantity, which is another proof that the agents must have seen "tin where it was not." Referring to his advice to "withhold my pen," I am inclined to act apon it, and I do not think I shall trouble you again with any remarks on this subject, amless those who write will come down from the regions of fancy, and confinct themselves to facts, and instead of indulging in sarcasm, endeavour to advance something which will conduce to the interest of the mine, and be the means of imparting additional information to the shareholders.

The writer of letter No. 2 accuses me of bringing a wrong charge against Captain officer. It would, therefore, refer him to my first letter (which it is evident he has not read), and compare it with the statement made by Capt. Gifford in his reply, and then say if I made a charge without any proof to substantiate inflicent experience of mining n

have the honesty to say so: the shareholders would then understand their position, and would be the better able to determine the mode of action which they should adopt in future.

Shareholder.

ABERYSTWITH SILVER-LEAD MINING COMPANY.

Str.,—Will you oblige me by giving a place in the Journal to the enclosed extract of a letter from one of the shareholders of this company who has just visited the mines? R. GARLAND, Secretary.

Moorgate-street-chambers, Oct. 29.

pany who has just visited the mimes? R. GARLAND, Secretary.

Moorgate-street-chambers, Oct. 29.

Oct. 25.—Having just returned from a visit to the Aberystwith Silver-Lead Mines, in which I am a large shareholder, it may interest you to learn the result of my personal inspection of what is going on there. I found the whole of the buildings in good repair and condition, the two powerful water-wheels, the crushers, and all matters relating to the machinery and dressing-doors in excellent working order; the reservoirs are full, the lests and landers perfect, and there is no cause to fear a level set for any operations connected with the mines. The launders recently erected to convey the water from Bwich Gwyn to the Penrhiw wheel, greatly economise it, and will, I anticipate, in future dry summers, prevent any suspension of the works on that secre. As regards the operations below, the principal work is sinking the Penrhiw engine-shaft to 86 fathous (or 49 fms. below addit), which is being done by nine men. You may expect the required depth (about 4 fms. more) to be reached by the end of November—it will then require some time to cut plat and to fix ladders, pumps, timbering, &c.—at allevents I think you may confidently reckon on all works connected with the shaft to be fully completed by the end of the present year at the latest. Capt. Trevethan then proposes to satisf men to drive a level east of shaft, and six others to drive west. I would remark that the shaft is groing down on the face of the lode (not in the lode), and it is not intended to test the lode till the bottom is gained, as it would interfere with the more important operation of sinking. There are, however, very strong indications of the presence of a rich lode, large stones of spar intermixed with time lead and steel ore are constantly coming to surface, some of which I brought up with me. The tributors at work at the fifth of the drive of 60 and 30 cm and 10 cm will turn out to much greater advantage to the shareholders than had the capital been frittered away in prospecting in the old levels. In conclusion, I have pleasure in saving that the present appearance of the mines gives me much satisfaction, and slithough I do not look for an immediate realisation of my hopes, I think we may reasonably expect by the middle of the next year at the latest, and probably before, that the Aberystwith will prove itself to be a rich and profitable mine.

FRON VELLAN MINE, MONTGOMERYSHIRE.

FRON VELLAN MINE, MONTGOMERYSHIRE.

Sig.—This mine several months ago was reported in some quarters to be of such a promising character that it caused quite a favore for mining in that neighbourhood, so that all mining setts in that vieinity were eagerly taken up by some influential parties. On looking at the weekly reports on the works, however, we find them of the same tenor from week to week and from month to month. It was promised that as soon as a communication should be made between the deep adit and the winze there would then be 70 fms. of backs available for stoping purposes. Since then I find a sump is being sunk below the deep adit. May I beg some of the more enlightened shareholders to ventilate this noted problem of mining at the Fron Vellan Mine, for fear I should draw on myself the displeasure or pleasure of some prejudiced mining Philistine of the neighbourhoad? Consequently I appeal to those interested as well as myself—Why is the deep adit not driven castwards?

Although it was computed some months ago that the deep adit level west was reducing? I tono so more per fation, as it was reported in the Journal of the 11th inst. I see there is not a single stope referred to. If there is, as reported, 70 fms. of backs available for stoping why not open them up and send the oreto market now, the price of ore being so high? Why not work the mine in a proper systematical and miner-like manner?

If there be any amount of ground east and west which produces 2 tons per fathom, for sufficient time and money have been allowed for the construction and re-modeling of the dressing machinery and to open out numerous stopes, how is it that no lead ore in any quantity is coming to surface so as to give any return of value or our outlay. Does not such a fact as this suggest that there must be something rotten in the state of Denmark? This is the sort of mining that deters capitalists from investing their money in the mines of the Principality.

I trust the shareholders will, without four or the loss of time, arouse

GAWTON MINE.

GAWTON MINE.

Str.—I think the remarks in a paragraph, at page 1168, of the Mining Journal of Det. 25, respecting a statement by "A Shareholder," inserted on Oct. 18, that they are "contrary to facts," is rather unwarrantable. I enclose for your inspection the alance sheet, as sent to the shareholders a few days after the meeting on Oct. 8. Fou will observe the costs are only charged up to June 21. Even taking the two nouths to Aug. 21, at the average cost, would have added 740% to the debit, and if he ore sampled and valued at 550% was broken in May and June, why not have dded July and Angust cost, taking credit also for the ore estimated as raised not unsold in these two months? Four months ore and munde is credited as 190% 18s. 4d. Take the four months cost from March 29 to June 21, it apparently mounts to 14774, a loss of 2772, and this assuming that there were increased liadities, either in merchants' bills or dues.

A SHAREHOLDER, Enclosing Control of the contr

EAST VAN MINE.

EAST VAN MINE.

Stra,—I am glad to find that this mine has at least one champion. As a bona fele shareholder for a large amount, and at high prices, I am so far from wishing ill luck to the ceneern, or attempting to "bear" the quotations, desirous solely for the shares to size that I may get rid of mine as quickly as possible. Thave a great regard for Mr. Gould Sharp, whose letter appeared in your valuable Journal of last week, and he doubtless believes all that he writes. But he is not Capt. Williams, the manager, neither from a sustained residence in London as a steek and share dealer can be be expected to know much about the bearings of a lode in the Liamidoes country. As for the 1000, cash still in hand, unless he is a director, the statement goes for nothing, and is based upon mere hearsay. The mine has unquestionably declined in public estimation, and it behaves some one or other to take the mitter up. I confess I am somewhat surprised that Capt. Williams has not thought it worth while to open his mouth. The directors by suffering a twelvemonth to elapse without calling a general meeting have infringed 25 and 26 Vic. c. 89, and are thereby open to proceedings at law at the hands of anyone aggrieved.

A CONSTREABLE SHARKHOLDER.

ENGLISH MINING, ITS PRESENT AND FUTURE.

ENGLISH MINING, ITS PRESENT AND FUTURE.

SIR,—I am quite satisfied with Mr. Barnard's reply. His last letter is the very essence of straightforwardness and candour, and no doubt he can do without my services, or I would willingly take up the endgel in his behalf, but he has my best wishes, and I now feel persuided that he will go in and win. It is only within the last few years that tin has been found in mundies. I am not competent to express an opinion, but I should think that it has existed in the stone for ages. Perhaps Mr. Ennor may be able to explain to us that it has grown since he was a boy. As the great mining seconds have failed for centuries to detect 20 hs. of tin it is occupation, which is the contract of the con

ENGLISH MINING-PRESENT AND FUTURE.

ENGLISH MINING—PRESENT AND FUTURE.

Sir,—Mr. Barnard, in his dissertation on English Mining, asserts that he could name dozens of copper mines producing 6 cox, of sliver per ton of stuff broken from the lodes, and he particularly mentions some half-a-dozen in corroboration of his statement. The columns of the Journal having been so constantly inundated by inflated random schemes started by Mr. Barnard—the whole of them proving lamentable and disastrous failures—I may, perhaps, be purdoned for desiring him to favour your readers with something in the shape of tangible proof of his assertion from some reliable peactical authority. Having a tolerably accurate general knowledge of the district from which his present episibles are dated, I am bold enough te venture the statement that not a single mine he names will produce the quantity of silver stated, or anything approaching it. I also (without desiring to follow him into the regions of quackery) would state as a caution to those who may be unacquainted with the district that Mr. Barnard is evidently attempting to build another of his imaginary structures on a very rotten basis.

Onserver.

RICHMOND CONSOLIDATED SILVER MINING COMPANY.

RICHMOND CONSOLIDATED SILVER MINING COMPANY.

SIR,—The letter of Mr. Applegarth, which appeared in last week's Journal, confirms all I had previously stated—that, although the company is in debt, the directors had paid dividends—a policy so utterly unsound as to be eschewed by every bona fide shaveholder who has more interest in the permanent success of the enterprise than in an undue inflation in the price of the stares. If Mr. Applegarth is statement be correct that I am "atterly ignorant of the affairs of the company"—which yet remains that I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I "insinuated the dividends had been paid out of borrowed money." All I constitute the dividends had been paid out of borrowed money." All I we provide the providence of the sessention has now been again verified by Mr. Applegarth, and the greater importance deservedly attaches to his testimony, because he assures as a providence of the providence of the company's affairs.

As Mr. Applegarth is so enviably as fat in all such matters, will he be so good at to inform one much less fortunately gilted how "an excess of expediture in the new mines" can be "set against" the "balance of loan account" Possibly Mr. Applegarth see some good financial reason for this, as well as for placing "the amount of unpaid calls on the last issue of new stock" in the summy possible that even "Mr. Possibly with "the anonymous writer," has given the general address of "London,," tongit the summy many mines, amples taken gave \$94 and \$100 to the t

anonymous writer " now asks what object "Mr. Postlet upporting an obviously inadmissible policy, especially is company? -Oct. 28.

RICHMOND CONSOLIDATED MINING COMPANY

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—When an anonymous correspondent invents his facts, it prudent on his part to rely on insinuations rather than on directally considered the product of the Richmond Company was false; it safer slander to insinuate that it is of a "sensational character, is and published to produce an effect." The cabled weekly returns sent on the rival to the Stock Exchange, and published in the daily paper, and the "sin thus forwarded by cables have in every instance been more than the "sin thus forwarded by cables have in every instance been more than the "sin thus forwarded by cables have in every instance been more than the "sin thus forwarded by cables have in every instance been more than the "sin so,000 tons, which I believe to be even still higher at this moment, according calculations represents a profit value of full 300,000", and that is false instead of the 3d. in "Anglo-Jonathan's" estimate. No man in his senses my that the amount actually in sight represents the total value of the 3d. in "Anglo-Jonathan's" estimate.

The capital was subscribed on what was then the prospective rather in shareholders should be able to see already the certainty of a return of the of their capital, and yet leave a "prospective value" virtually green that is a fact about which there is no reasonable doubt. I speak confident cause I have had the mine examined on my own account, and believe that timate of freserves issued by the board is much under the mark. Of cours open to any anonymous scribbler to instinuate false motives for my virtually green the cause I have had the mine examined and slanderous statements were be seminated. As the present average monthly profits are over 15,000°, those is margin in even nine months' work to cover a possible shut down for three wingth cause a difficulty in shipping ballion. "Anglo-Jonathan "choses to the fact that the charcoal is accumulated in fine weather, and stores of ore the dumps, to meet the contingency of bact possible shut down for three wingfit ca

QUICKSILVER EXTRACTION.

The present wasteful and unsatisfactory method of treatin nabar demands an entire change, more than half the mercury ore being lost to commerce, and every pound so lost is at the \$1 out of the pockets of the owners. Why cannot science be he to bear upon this work as well as in the treatment of other In our works alone, out of 1600 tons worked on the old, pla an average of \$\frac{3}{2}\$ lbs, per ton was obtained, where the ore tentained by repeated assays from 20 to \$0 lbs, per ton. The loss was simple mous. Another fact which is patent to everyone is the waste of time and quired in the making and treatment of adobes from the small or refuse in the processing of the following the forms economy of fuel, labour, and money is as much needed here as in any othe Here there is an open field for improvement. It has long been known the silver may be most readily separated from its one by treatment with quittee that the control of the cinnibar combines, by virtue of a superior affinity lime to the exclusion of the mercury, to form sulphides of lime and such of the control of the cinnibar combines, by virtue of a superior affinity lime to the exclusion of the mercury; to form sulphides of lime and such of the control of the con The present wasteful and unsatisfactory method of treating a

periect apparatus invented.

HUBERT BA
Superintendent Napa Quid

Mining and Scientific Press (San Francisco).

A New Reagent in Amalgamation.—I am dyor attention to an improved method of treating gold and so roasted, by a pan and barrel amalgamation. It is necessal tests known to the metallurgist that may help to explain the tion. Millmen have long been in search of some chemical attereduction of auriferous and argentiferous ores. Many proceed to this end, and even carried into execution. Most of met the fate that better informed men had predicted. Other success. I here allude to the use of sub-chloride of copper, and sodium. The first is a powerful reducing agent of the armolar favourable conditions, but its power is less marked viron; hence the difference of results munifested by its use amalgareation. There are potent reasons for this change of of polassium and sodium smalgam have strong reducing quantions. Unfortunately their cost prevents their use with lodigressions, perhaps, may help to render intelligible the process This process consists in the application to pan or barrel analy line hydrated protoxide of iron. This substance has great recompounds of sulphure, oxygen, and chlorine with the precise A NEW REAGENT IN AMALGAMATION, -- I am desirous of ca

October 14.

CAMP FLOYD.—Five more bars of bullion were received on light day night from this company's mill, of the value of \$6557. This lot making 22 bars, or \$22,000 worth of bullion forwarded to Salt Like City since Mr. H. seel took the head management of the Camp Floyd Company's affairs. There is anticient ore on hand at the mill to supply some \$25,000 more, and shot light coming in daily. We congratulate Mr. Sewell on his continued success, and thus inspirit in that all this has been done out of his private resources, and thus inspirit fellow-shareholders in England with thorough confidence in the future proper of the new company that is being now formed. We understand that in successfully company's mines, samples taken gave \$94 and \$106 to the ton.—St. List Hardid, Oct. 9.

Deep pressure. New years Stramman of the company we have the human of the human content of the successful that the second content of the company's mines, samples taken gave \$94 and \$106 to the ton.—St. List Hardid, Oct. 9.

Depressed Nerves Suppress Strength. - No part of the human

Rectings of Bublic Companies.

GAULEY-KANAWHA COAL COMPANY.

GAULET-RAMAN COMMITTEE GRAPH COMMITTEE GRAPH COMPANY'S statutory meeting of shareholders was held at the company's Queen Victoria-street, yesterday, Colonel SHAKESPEAR in the chair.

L STEUART (the secretary) read the notice convening the gand the subjoined report of Prof. Anstead, F.R.S., was sub-

Colonel SHAKESPHAR in the chair.
Colonel SHAKESPHAR in the chair.
Colonel SHAKESPHAR in the secretary) read the notice convening the gHART (the secretary) read the convening the secretary is a secretary of the coal is given to the compan me was a single myself that the number of workanged to the compan the coal is fully equal to that stated in the proposal the deality of the coal is fully equal to that stated in the proposal is convening the coal is fully equal to that stated in the proposal is convening the coal is convening the coal is convening the coal is convening the coal is convening to the coal proposal the coal is convening to the coal is a work to the coal is a second to the coal is a convening to the coal is a coal in the coal in the coal is a coal in the coal in the coal in the coal is a coal in the coal in the coal in the coal in the coal is a coal in the coal is a coal in the coal

ated by what is called Board measure, the foot being heartman said: This is the meeting in accordance with the in the Act which compels directors to call together the share-in every new company within four months of the date of tion, and usually on like occasions there is not much to say, a can be done in so short a time. But we have been attacked ers in an American paper, styling itself the Charleston Duily, and those attacks were copied and published in this country influential paper, the Mining Journal. The object of the in the Courier was, to use their own term, to "squelch" in the whole concern; however, the attack was met by this by Prof. Ansted, and myself. We soon learned that a "ring" in formed against us, and we are really much indebted to the off the Mining Journal for having made for us the opported by the state of said: This is the meeting in accordance with the Chesapeake and Ohio Railway, and our Gauley estate, was for it is called the Tyree estate. Plans accompanied the General's mendation for us to acquire the property; and, it seeming a valuable addition, our Chairman, Professor Ansted, who was to Virginia on business, was requested to visit the locality and ze for its purchase if desirable. In September Prof. Ansted agland, and on his arrival in New York he called on some parawhom he had introductions, and who may be of use to us d any legal questions arise. On Oct. 2 he wrote to us from nond, Virginia, that General Imboden had met him on his arthat he had since held a meeting of our committee; that he he had since held a meeting of our committee; that he coedingly well received by the leading people of the "free passes" during the whole of his stay had been over 1000 miles of the principal railways in Virginia; d good reason to expect help in every way from the e and Ohio Railway authorities; that our undertaking is in all respects of the greatest importance, and perfectly valuable timber, that he had found a saw-mill available to hand, a had purchased it, and that operations with the timber would manner forthwith; that Gen. Imboden's brother, in the lumber had would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be a superior of the same timber would be said to be de, would undertake that department, and that he (Prof. Ansted)
a availing himself of the services of the chief engineer of the

wise discretion of our Chairman (Prof. Ansted), we have on his recommendation approved the purchase of this Tyree estate for the sum of 1500% in cash and 300 preference shares of 5% each, fully paid-up, Class A, feeling convinced that it will not only prove most remunerative, but from its local position in reference to our Gauley property, we were bound not to let it get into other hands. On the 11th instant Prof. Ansted wrote to us about the Gauley estate, to acquire which this company was formed. He had carefully examined it, and says the number of workable seams of coal, and the quality, was fully equal to what had been stated in the prospectus, and is conveniently accessible from two mountain gorges, Rock Camp Creek, barely three miles, and Bucks Creek, seven miles from the junction of the Gauley, with the Kanawha river. He describes the Gauley river as a wide stream with a considerable body of water, and as being the natural outlet for the coal. Some improvement is wanted to make it permanently navigable throughout the year, but that is all, and he considers the cost of so doing cannot be great. He states that the coming session of Congress will take the matter of the navigation of these rivers in hand. In the meanwhile he advises that the Gauley coal be left alone for the present, as the owners of larger tracts further away must shortly see to the construction of a railway up Gauley, and, as he expresses it, "they must pass our door." In regard, however, to the timber on the Gauley property, he describes the estate as being covered with an unusually large quantity of magnificent timber, and we understand that operations to bring it to market have already commenced. From our lumber trade alone, Prof. Ansted expects a very large net profit before June next. We have another letter from Professor Ansted, of the 17th inst., giving some matters in detail, but the substance of our information is before you, and I hope you are all as well pleased as we are, for there can be no longer a doubt about it that our und

substance of our information is before you, and I hope you are all as well pleased as we are, for there can be no longer a doubt about it that our undertaking will be a most splendid success.

Mr. E. J. Wilso's enquired whether there was any difficulty as to the cottages for the labourers, what was the total number of shares taken, and whether the transfer of the first portion of the property was complete?

The Chairman's did not apprehend any difficulty with regard to the miners' cottages; it was merely a question of the lumber. A brother of General Imboden had been appointed in connection with the management, and, as these gentlemen were intimately acquainted with the business, the directors had full confidence in him. He (the Chairman) believed the title to be thoroughly good, but they had received no direct information upon the subject. The matter had been left entirely in the hands of Prof. Ansted, and upon his arrival at New York he had called upon a legal authority there to settle matters; and it was only through the absence of Mr. Jenkins from New York that there had been a slight delay. The title, however, was to have been substantiated before Nov. 15, and the company were thereupon to pay 1500%. A telegram from Prof. Ansted of that date announced the payment of the amount, so they might presume that the title had been substantiated. Mr. WILSON understood that the funds which the directors had in hand would suffice for the working of the Tyree property, which it was proposed to work at once for coal, the Gauley property being only worked at present for the lumber.

The CHAIRMAN said that was so.

Mr. WILSON had merely asked the question, because he understood from Prof. Ansted's report that they would want more money to work the first property. Associated the payment of the theory would want more money to work the first property. Associated in the sum of the property with the was substantiated they would be quite ready to subscribe the capital in New York.

Mr. WILSON had that from what he save on as t

THE WELSH "STEAM COAL" COLLIERIES.

THE WELSH "STEAM COAL" COLLIERIES.

The statutory meeting of shareholders was held, on Wednesday, at the City Terminus Hotel, Cannon-street,
Mr. R. RICHARD ATTENBOROUGH in the chair.

Mr. F. ROBINSON (secretary) read the notice convening the meeting.
The report of the directors stated that immediately upon the formation of the company they took steps to commence and vigorously prosecute the works necessary to establish the company's cellicries. The site of the company's operations has been fixed upon a spot which they believe to be most advantageously suited for the purpose, being on level ground, and close to the line of railway, where sidings can made at a moderate cost. Before determining to commence operations thereon, the directors benght the freehold of the surface of the land; the minerals there under already belong to the company by virtue of their lease, and such surface has accordingly been conveyed to the company, and they congratulate the shareholders on the fact that the extensive works which the company contemplates carrying out will be upon their own freehold. Operations have been already commenced thereon, and due requisite arrangements are made for their being pushed forward with the utmost dispatch. A level has also been opened on one of the company's upper seams, and coal is now obtained therefrom for use in the company's works. The necessary arrangements have also been made for proving the lower or Aberdare seams on the company's property by boring operations for the purpose of ascertaining the depth and thickness of those seams in accordance with the causes in the company's leases. The directors have had before then various applications for sub-leases of portions of the company's minerals, but have not been able to agree upon terms with any of the company's present property, which they believe can be very advantageously worked for the benefit of the company. This colliery is called the Lower Resolven Colliery, is situate at Resolven, immediately adoining the north-east boundary of the compa

avourable opinion they entertain of the company's property will be fully realised. The CHARMAN said: At this their first meeting there was very little to report, but he was glad to see so many shareholders present. The company had been established only three months, and although they had already entered into some very important undertakings there was not much of interest to tell the shareholders. Immediately upon taking possession the directors had met upon the property, and made a very careful survey of it. The freeholder of the property, Mr. Henry Whitworth, was doubtless known by many of the shareholders, and it gave him great pleasure to tell the shareholders that Mr. Whitworth had be them have the very valuable lease on favourable terms. (Hear, hear.) The royalties were very moderate, and the contingencies were matters of very little moment in a property of such an enormous extent. Having met at Neath, they walked over the whole of the property, and they say that it abounded to a remarkable degree in mineral wealth, for not only were mines being worked all over the property, but seams of coal alone was sufficient, with coal necessary to get down to the Aberdeen seam. This testiles to the mineral wealth of the district, and of their especial property in particular. Mr. Huxham, their engineer, accompanied the directors in their visit to the property. While on the property they had been strack with a very convenient portion of the surface for sinking their pits and for general purposes, and they at once saw that it would be an immense advantage to the company to bring it into immediate operation. Upon enquiries being made it was found that that portion of the surface property did not belong to them, athough the minerals undermeath it were is that the Chesapeake and Ohio Railway will contract on realizations that the Chesapeake and Ohio Railway will contract on realizations of the greatest importance, and perfectly the terms to make such railway as we may think necessary, will probably take at least one-third payment in our shares, will probably take at least one-third payment in our shares, and that over almost the whole estate there appears to be at least one almost the whole estate there appears to be at least one almost the whole estate there appears to be at least one almost the whole estate there appears to be at least it is the state of the purchase of the contract for the purchase of the surfable seams of coal of good quality, having a total thickness of the state of the surfable seams of coal of good quality, having a total thickness to least than 60 ft. He describes the property as being part of a stail range, with convenient ground for a railway of less than 60 ft. He describes the property as being part of a stail range, with convenient ground for a railway of less than 60 ft. He describes the property as being part of a stail range, with convenient ground for a railway of less than 60 ft. He describes the property as being part of a stail range, with convenient ground for a railway of less than 60 ft. He describes the property as being part of a stail range with convergence. Of the 14 seams there is one at the sail range of the surfable stails range, with convergence. Of the 14 seams there is one at the sail range of the surfable state o

mind that they would be, but he did not like to be too sanguine to the shareholders—he thought they would have a sufficient amount of coal from the "Lower Resolven," their new purchase, to pay a not-to-be-despised dividend on the whole solven, their new purchase, to pay a not-to-be-despised dividend on the whole solven, their new purchase, to pay a not-to-be-despised dividend on the whole would keep them at work while they were in thoroughly workable order, but it would keep them at work while they were in thoroughly workable order, but it would keep them at work while they were in thoroughly workable order, but it would keep on working there until they reached the seams on their own property, when they could either work the two properties or confine themselves to their own, and sell the other colliery. Their engineer had posted his latest reports to the directors the previous evening, but they learned by telogram that he had omitted to place would say that they had purchased an engine from Meesw. Clayfon more would say that they had purchased an engine from Meesw. Clayfon more would say that they had purchased an engine from Meesw. Clayfon the work of the shareholders, although, in his opinion, there was no necessity for it, as its existence was expected that it would be entirely free from water. The coal from that seam was always sure of a ready market; it was within a short distancel of Cardiff, Swansea, and Port Tablot, and they had already received applications for the supply of the shareholders, they might, he though expected that will the sanction of the shareholders, they might, he though experience and will the sanction of the shareholders, they might, he though the did not wish to go into the high-priced question, for if they went to bear to get at their own coal; the more especially looking at the present high prices, though he did not wish to go into the high-priced question, for if they went to bear to go ent. they would still be able to work the colliery thoroughly, and pay handsome dividends. The

THE GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND.

An extraordinary general Court of proprietors was held on Wednesday, at the Terminus Hotel, Cannon-street, for the purpose of considering certain arrangements to be then submitted to them, for the improvement of the harbour of Port Talbot, and, if approved, of authorising the Court of Assistants to enter into an undertaking in the name and on behalf of the company, for securing by means of traffic the payment of interest on the sum required for effecting traffic the payment of interest on the sum required for effecting such improvements.

Mr. Alexander Beattle (the Governor) in the chair.

Mr. THOMAS R. STEER (the secretary) read the notice convening

Mr. Alexander Beattie (the Governor) in the chair.

Mr. Thomas R. Steer (the secretary) read the notice convening the meeting.

The report stated that the subject of improving Port Talbot, so as to admit of the safe entrance of vessels of such a class as are now principally employed in carrying ores and other materials to the works in South Wales, has frequently engaged the attention of the Court of Assistants, and the subject has become more important and urgent as the company finds it necessary to incur greater expenditure in getting cargoes for the works at Cwm Avon through Cardiff, Swansea, or Briton Ferry, on account of the insufficient accommodation afforded for large vessels at Port Talbot. During the last seven or eight years the question of improving the harbour of Port Talbot has from time to time, consequently, been under discussion. The late manager, Mr. Struvé, and Mr. George Turnbull, a member of the Court of Assistants, whose great experience as a civil engineer specially qualified him to form an opinion upon it, made reports, and suggested modes of effecting the object in view. Messys. Edwin Clark and Frederick Barry also were applied to by the Court, in 1866, to make a report, and suggest the best means of adapting the port to the several descriptions of vessels engaged in the coast trade of South Wales, and since the present Court cume into office they have considered it to be their duty to give the matter their best consideration, and have come to the conclusion that it is important, in the interests of the company, that no longer time should be lost in carrying out such works as may render Port Talbot suitable for the requirements of their own trade, and at the same time bring such an amount of traflic to the port from other sources as may in course of time render the capital which this company has invested in former years in the Port Talbot suitable for the respected his willingness to advance the sum required to carry out the works necessary to accomplish this desirable object, and with hi

in the circular which had been forwarded to each proprietor. The Court of Assistants were desirous to confer with the proprietors, and obtain the benefit of their opinion upon this most important matter. The question really was whether the money they were now spending for bringing materials from other ports would not be better employed in ensuring the improvements in Port Talbot. They had difficulty in selling their produce in London at a price that would be a profit to the company, simply from having faincur more exbe a profit to the company, simply from having to incur more expense in sending their iron to Swansea and Cardiff. If Port Talbot were made suitable for ships to take their iron they would be able were made suitable for salps to take their fron they would be able to save 3s, per ton. The Court of Assistants thought that as Mr. Talbot was perfectly willing to co-operate with the company in improving the port the question should be gone into, but before submitting any resolution he should like to hear the opinion of the

DIOPTIETOTS.

Mr. Sfreebant said that he was a very small shareholder, and also a very recenne, but he had a direct interest in the company, inasmuch as he had been called

Mr. Sprekays said that he was a very small shareholder, and also a very recent one, but he had a direct interest in the company, inasmuch as he had been called upon several times to negociate the sale of its iron, when he found the one great difficulty to contend with was the question of shipments, because there was no amount of certainty that ships could be got to go to Fort Tabot except at an increased freight of 2s. 6d. to 3s. per ton. It was highly desirable some alteration should be made as to the mode of ingress and egress into the port.

Capt. Chapman said his experience had been parallel to that of the last speaker, and was very glad indeed that steps were about to be taken to remove the difficulty. Mr. Springers (a member of the Court of Assistants), in reply to a question, stated that the general length of the American and Canada trading steamers was about 300 feet, and it was proposed to make the pier a few feet longer.

Mr. Crewboson was very glad to hear the basis upon which it was proposed to extend Port Tailoot. He did not know that the company would have been justified in spending a large sum of money, or in guaranteeing an interest upon a large amount of capital, simply as a speculation, in order to utilise or render productive the capital that company already had there. The most important feature in connection with the proposed improvements would be the facility the company would gain for conducting its own traffic. By the proposed alteration they would to a very great extent get the control of their traffic within themselves, therefore he looked with great confidence for a far greater saving than could be calculated upon paper. Their own traffic would be increasingly carried on from the sea, and the way to make traffic was to provide conveniences for it. He considered the expenditure judiciously made would be of great advantage to the company. He had great confidence in the Court of Assistants, but he hoped the agreements would be so drawn up as not to leave the company in any difficulty in t

A thi

entered the port, with an aggregate tonnage of \$4,358—but it had gradually dwindled down last year to 489 vessels, aggregating \$5,447 tons, and it would become worse and worse, rendering useless the wharfage and storage, unless the proposed improvements were carried out. In reply to Mr. Crewdson, he renthioned that the proposed agreement ran part passu with the company's lease.

Mr. You've (the company's solictor) said the present question should be as a purelybraders' and manufacturers' one, irrespective of the last that the company had an unproductive capital invested in the port. The Copper Company were great manufacturers, but it was vital that they should have the raw material on the one hand brought to their doors, and the manufactured article shipped from their doors. It was with that view exclusively that the present soleme was propounded, and rendering that which was now a useless port a useful one. That would involve an outlay of (say) 40,000/., which practically it was for the Port Talbot Company thad but two shareholders—Mr. Talbot and the Copper Company. Mr. Talbot says, "1 will find the capital required, but where am I to look for the interest?" Mr. Talbot risks his capital, for which he desires to be assured that the Port Talbot Company will, somehow or other, find the means of paying him interest. Here the contemporaneous agreement with the Copper Company came in to meet the difficulty by the Port Talbot Company issuing to Mr. Talbot preference shares overriding all existing capital to the extent of 40,000/., in consideration that when the harbour improvements had been completed and in operation to Copper Company undertakes to send traffic to the extent of 40,000/., in consideration that when the harbour improvements had been completed and in operation to Ecopper Company undertakes to send traffic to the extent of 40,000/., in consideration that when the harbour improvements had been completed and in operation the Copper Company undertakes to send traffic to the extent of 40,000/., in considerat

scheme, and that the same be carried into effect.——arrow and the proposition.

The Governor, in reply to a question, stated that the time occupied in completing the improvements depended much upon the weather and other causes, but their engineer estimated something between 12 and 18 months.

Mr. Horner was sorry to say be could not agree with this scheme. He thought it was rather hasty: the shareholders had not had sufficient notice. He suggested that the proposed scheme should be printed and circulated among the shareholders before any real decision was come to upon the matter, and that the meeting should be adjourned.

be adjourned.

Mr. GILPIN said the question had already been considered by the shareholders, while the scheme had the unanimous approval of the Court of Assistants.

After some further discussion the motion was put and carried nem. con.

A unanimous vote of thanks was passed to the Governor and Court of Assistants, which closed the proceedings.

LINARES LEAD MINING COMPANY.

half-yearly meeting of shareholders was held on Thursday, at

Increase entos Mine costs to June 30 previous half-year Quinie

payment of a dividend, or as a provision for other discussements.

The CHAIRMAN said it became his duty to move the reception and adoption of the report and balance-sheet, and in doing so he had very few observations to make preparatory to asking the meeting to adopt that resolution. It would be observed that there had been an increase of about 2000l, in the costs of the half-year under review, compared with the preceding half-year. It had been their intention to spend a considerable larger amount of money in the way of explorations than they had done in the preceding half-year, and they hoped to have achieved a success. They had not been very successful, but they had opened up a large quantity of ground which would enable them very shortly to get into much deeper levels in the mine. There need be no apprehension that there had been any falling off in the profits, for if these large sums of money had not been expended the profits would have been equal to those of the previous half-year. He made these few observations to show that the profits had not decreased. In the preceding six months they had paid a dividend of fs. 6d. per share, and this six months they were, at present, only declaring 5s. This had entirely arisen from prudential motives, for they could pay the same dividend as last half-year, and yet leave a balance of 3300t. to be carried to the credit of profit and loss, but in consequence of some of the many different authorities in Spain having declared that England was infected with cholera (although it had not been heard of in England) their shipments had ceased for nearly a month. The ships which were in the habit of bringing supplies of lead weekly had been put into quarantine. Looking at this and the heavy expenditure, the directors were afraid that it would not be product to divide all the money which they were enfarid that it would not be product to divide all the money which they were enfarid that it would not be product to divide all the money which they were had mentioned; but, as the report mentioned, there was every probability of their paying the other 2s. 6d. in December. Their shipments had increased, and the 2s. 6d. might be counted upon. As things had turned out they found that they could have paid the 7s. 6d., but it was quite as well to exercise discretion in the matter, and not to expend the money when there was a chance of the lead not forthcoming to meet their liabilities. Next month they hoped to clear out every atom of lead they had in Spain. It would be expected that he should say something of the political state of Spain. So far as the revolution had at present gone it had caused but very little hindrance, and consequently their works had gone on smoothly, and their workmen had never worked better. There had been a time when it vas said that the district of Linares had declared itself a canton, the same as Carthagena; the fact was that a band of 500 or 600 men established themselves some little way out of Linares, and had declared that they would take the place if they would not pay them not to do so; the reply sent by the inhabitants of Linares had been that if they wanted the money they had better come and get it. Their men had gone out to meet the insurgents, but this band of men when they saw the attitude of the people, had made a hasty retreat. This had delayed the men for 24 hours, but this was the only time they had been delayed. The transit of their metal had been impeded for ten days in consequence of the bridge over which it had to travel having been destroyed. This was the whole effect which the insurrection had had upon their works. Another point as to the dividend or the profit earned during the six months; their metal had not been sold at the present high prices; they were not "lead speculators," but "lead producers," and they looked with confidence to the current six months, when they would begin to realise these advances. With these few observations he would move the reception and adoption of the report so the current six months, whe

Mr. John Taylor said he thought it was very wire to declare the dividend which they had done, and keeping money in hand for Habilities which might arise, with the large number of men employed in the three companies. They had to meet every exigency, and it was their constant anxiety to give the shareholders the full amount of dividend possible. Owing to the improved prices for lead they were enabled to work a great portion of the mine which otherwise they would not have been able to work. That was more particularly the case with the Quinientos, where they had opened up a considerable quantity of ore ground; sad this mine would, doubtless, become a very good one when it was developed, which would be proceeded with as quickly as possible. The financial position of the company was as good as ever. If the Quinientos turned out at all well they would have in it a very valuable property for some time to come.

The meeting then became extraordinary, and the Chairman proceeded to explain that it was desired to alter the Deed of Settlement, as described in the following resolution:—"That clause \$2 of the Deed of Settlement shall be altered thus: That the board of directors should cause such moneys and funds of the company as in their discretion shall not be immediately wanted, or that it shall not be necessary to leave in the hands of the bankers for ensuring the funds to carry on the company, be invested in the name of the company in such manner as the directors may think fit." In the Deed of Settlement, as it at present stood, they were obliged to invest these sums in Government Consols or Parliamentary Stock, and take the chance of them rising or falling, as the case might be; and by this means they might lose a considerable sum. They were nat transmelled in this way in any of the other companies, and he thought it was better to place any surplus funds at their bankers, and get interest on it. (Hear, hear.)—Mr. Adelicio Milk seconded the motion, and it was carried unanimously.

ALAMILLOS COMPANY.

The half-yearly meeting of shareholders was held at the offices Queen-street-place, on Thursday,
Mr. JOHN PHILLIPPS JUDD in the chair.

Carrying forward to next account. £1,492 14

The state of the lead market has been very favourable during the past six months that the company's produce has realised good prices. The market is still firm d the directors look forward to getting better prices for the present half-year

The state of the lead market has been very favourable during the past six months, so that the company's produce has realised good prices. The market is still firm, and the directors look forward to getting better prices for the present half-year produce.

The CHAIRMAN said he might, indeed, congratulate the share-holders upon finding that, notwithstanding the disturbed state of Spain, there had been no interruption whatever to the working of the mines, and that the profits of the half-year were satisfactory, taking into consideration the high price of coal. (Hear, hear.) The directors had declared a dividend of 2s. 6d. per share, and were in a position to have declared 3s., but considered it advisable to retain a certain amount of profits to meet any contingency that might have arisen. Had they declared 3s. there would have been left in hand something over 1800c, had been set apart to the reserve fund, leaving the balance on profit and loss 128%. As to the mines, although the raisings had been kept up, the reserves had not in any way been entrenched upon; and although many of the levels were not quite so good as could be wished, still, on the whole, there was every reason to look forward to the current half-year being as good in the way of profits as the profits of the current half-year would be realised upon lead at an average of 23%, per ton, so he thought he could not only congratulate the shareholders upon having received a good dividend for the past half-year, but also to inform them that they might look forward to receive at least the same amount at the end of the current half-year would be realised upon lead at an average of 23%, per ton, so he thought he could not only congratulate the shareholders upon having received a good dividend for the past half-year, but also to inform them that they might look forward to receive at least the same amount at the end of the current half-year would be realised upon lead at an average of 23%, per ton, so he thought he could not only congratulate the shareholders upo

FORTUNA COMPANY.

The half-yearly general meeting of shareholders was held at the

The half-yearly general meeting of shareholders was held at the company's offices, Queen-street-place, on Thursday,
Mr. Robert Henry in the chair.
Mr. Swaffield (the secretary) read the notice convening the meeting. The report of the directors was as follows:

The directors have again the pleasure of presenting to you a statement of accounts, which is only less by 6794. Is. 9d. than the profit of the preceding half-year, not withstanding that the smelting and mines costs have been greater in consequence of the enhanced price of fuel and all description of stores. The mines continue to open out well at several points, and promise to yield a good return of ore during the present six months. At the Salidos Mine the lode in the low, east of San Pablos shaft, is developing valuable ore ground, and the richness of the lode augure well for the deeper levels which will gradually come under it. The lode wrought upon at the new mine in the Graciosa pertinencia has also been turning out well, and the levels in this mine are being rapidly extended.

iaft, is developing valuation ore gradually come under it. The lode wrought up it the new mine in the Graciosa pertinencia has also been turning out well, as a levels in this mine are being rapidly extended.

At the Canada Incoa Mine the levels have continued rather poor, with the eption of the workings on the south lode. A winding-engine is about to be prided to facilitate the raising of ore from this part of the mine. The reserves iscovered ore in the mines are now estimated at 2000 tons. The smelting has be anducted at the mines as heretofore, and the results have been uniformly god and and coal carriage have been conducted without any serious interruption.

tendency of the market is still upwards. The contracts last made by the board were at the price of 23%, per ton.

The directors were enabled to pay an interim dividend of 5s. per share in June last, and still leave a balance of 10,9784, 10s. 2d. to the credit of the profit and less account, as shown by the balance-sheet annexed. This would have admitted of a further dividend of 7s, per share, as was paid in April last, but in view of the present unsatisfactory state of political matters in Spain, the directors thought it best to retain a good balance in hand to provide for contingencies, and to declare 5s, per share only only on the present occasion. The sum of 10006, has been placed to the credit of the reserve fund, raising that fund to 20006, and 5006, has been placed to the credit of the reserve fund, raising that fund to 20006, and 5006, has been set said towards defraying the cost of the engine, to which reference has already been made. After making these deductions there will still remain a balance to the credit of the profit and loss account of 32286. 10s. 2d. to be carried forward to the next account. A vacancy having occurred in the auditorship, by the retirement of Mr. Charles Roberts, the directors have provisionally appointed Mr. F. W. Bigge, who is duly qualified, to that office. This appointment will be submitted for the approval of the shareholders at the annual general meeting in April next.

The CHARBMAN said that he had a very few observations to make, because it so happened that his predecessors who had occupied the

because it so happened that his predecessors who had occupied the chair at the Linares and Alamillos Companies had explained the main points. He might mention, however, that their operations had not points. He might mention, however, that their operations had not been in any way interfered with by the political movements in Spain; the only interference at all was during the time of the quarantine under the apprehension of cholera, which interfered with their export in lead. The consequence was the lead accumulated, necessitating the post-ponement of the dividend; but a large quantity had now come forward, and they were in a comfortable financial position. The quantity of lead raised had not been so large as upon former occasions by about 200 tons; no attempt had been made to increase by any undue cutrenchment upon the reserves, but they had made a

very good profit, and declared dividends of 10s, per share. A larger dividend, which they might look forward to with covariable to dividend, which they might look forward to with covariable for the balance of profit and loss there had been carried forming. Out of severe fund. There had been written off from time to time the small balance of profit and loss there had been carried forming. Out of severe fund. There had been written off from time to time the small shall be the means of some inshing them with money for carrying on their operations, so the the region inshing them with money for carrying on their operations of the severe fund. There had been written off from time to time the small shall be the means of the severe fund. There had been written off from time to time the sale shall be the means of the sale shall be sale s

who were desirous to seil their shares, but he was not so certain it w
the purpose quite so well of the buyers of the shares.

A SHAREHOLDER asked if any lead mine had been worked to a greate
Fortuna? —Mr. John TAYLOR said the richest lead mine in the
Bohemia, and more than three times the depth; and the Government
Linares district was double the depth of Fortuna: practically, in the
mation there was no depth ever yet reached where lodes were unbotte
The motion adopting the report and balance-sheet was put and cari
A vote of thanks to the Chairman and directors closed the proceedin

MELLANEAR MINING COMPANY.

MELLANEAR MINING COMPANY.

An extraordinary general meeting of shareholders was held attle London Tavern, on Tuesday, for the purpose of considering, and if approved, passing all or any of the following resolutions:—I, he consider the propriety of leasing or selling the mine, lease, and mechinery to a new company, and, if necessary, to pass special residences to enter into contracts for such, or any lease or sale, and a carry out the same.—2. To wind up the company voluntarily, under the provision of the Companies Act, 1862.—3. To pass such residences, whether special or otherwise, for carrying out any or either of the foregoing objects, or any part or parts thereof, as the meeting may deem expedient or necessary.

Mr. WILLIAM NEWLAND RUDGE in the chair.

Mr. H. WILSON (the secretary) read the notice convening the

Mr. H. Wilson (the secretary) read the notice convening the

Mr. H. Wilson (the secretary) read the notice convening the meeting.

The report stated that the invitation to subscribe for mortgage debenues a having been responded to, the directors, having in view the present liabilities the company, feel that unless the shareholders will come forward to protest their terests, there is no other alternative but to wind-up the company. It is with gregret that they have some to this conclusion, as all the money expended by the present shareholders on this undoubtedly valuable mine will in that even possible that some proposition will be made to prevent such a misfortune, and enable that some proposition will be made to prevent such a misfortune, and enable the present shareholders to reap the benefit of their outlay.

The CHAIRMAN said that since February all the calculations of Capt. Rogers had been upset by the advanced price of coal, and the lessened value of copper, the result having been a loss of 4001, pt month. The directors convened a meeting some time since to discuss with the shareholders as to the most desirable course to be adopted but only one shareholder attended. He had now to inform the mesting that the directors had been compelled to close the mine to prevent the whole affair being placed in the Stannary Court; and head ing that the directors had been compelled to close the mine to prevent the whole affair being placed in the Stannary Court; and held now to ask the assistance of the shareholders in determining the best course to be adopted under the circumstances. He mentioned that since February the labour cost had amounted to 400%, and the merchants' bills to 4018/l.; there had been received on calls 300 and the ore sold had realised 4000/l.; the liabilities up to the present time were 6258/l.; the arrears of call were about 620/l.

Mr. Waddingfor said there could be no doubt the Mellaneur was a spinificance, and the only drawback was an enormous quantity of water, which would overcome by the large engine on Gundry's shaft.

Mr. MacEwax considered a greeious error had been made in closing the nine and expressed surprise to learn that Messus. Harvey and Co., of Hayle, haisant letter to the effect that if the mine were not closed they declined to send faint supplies. To place the company in such a position should be reproduced, all hoped there was sufficient power among the shareholders to keep the property of the hands of the Messus. Harvey. He did not impugn anything wors all directors, although he could not help thinking that had the property be deliged to the extent indicated upon previous occasions the result anticipate will

loped to the extent indicated upon previous occasions the result anticipations have been realised.

The CHAIRMAN then proposed the first resolution contained in the comment of the meeting.— Mr. Howand seconded the resolution.

Mr. M. K. WAN moved an amendment that the meeting be adjourned for life in order to give the shareholders time to consider the most expedient cosmic pursued.— Mr. ONSLOW seconded the amendment.

A SHAREHOLDER said that Mr. Harvey, one of the firm of Messrs. Harry, we elected a director by the shareholders at a general meeting.

Mr. Thomas certainly thought there was a case for enquiry for having does the mine in such a position as it was known to be in was indeed an impose course unless there was an irrestatible cause. It would be satisfactory if the director would agree to an adjournment for 14 days, so as the matter might be vestigated.— Mr. MACEMAN seconded the amendment.

The CHAIRMAN said the directors would be very glad to entertain any residing the shareholders might like to propose as to the closing of the mine, the director could do nothing else. Messrs. Harvey and Co. refused to supply, and gift further credit.

could do nothing eige. Mesers, harvey and Co. Feducal to support further credit of the company's solicitor) suggested simply as a mixed policy—for he knew what Cornish merchants were—that the amendment solid being eigeneral terms. The fact of merely raising the question of the inship is curred by directors or committeemen in supplying the mines with materials, as and thereby making a profit, was like sending a bombshell into Cornish, because it was the invariable custom of all Cornish merchants to take a sufficient interest in the mines to ensure the control of the financial affairs as rel at interest in the mines to ensure the control of the financial affairs as rel at content of the control of the financial affairs as rel at the control of the financial affairs and the control of the financial affairs and the control of the financial affairs and the control

of I was done in the interest of the shareholders. Had they continued to said it was done in the interest of the same time giving, as it were, tore it would have increased the loss, and at the same time giving, as it were, fore it was those to the same time giving, as it were, fore it was those to the same time giving. All they do the same time, which no doubt would be the case in the spring. All they do the mine, which no doubt would be the case in the spring. All they do the mine, which no doubt would be the case in the spring. All they do that the with Messrs. Harvey and wat for the advent of better times, ow some further discussion the amendment before the meeting was withsome further discussion that day fortnight, and that a committee of three meeting be adjourned to that day fortnight, and that a committee of three meeting be adjourned to the day fortnight, and that a committee of three meeting be adjourned to the day of the same time of

DOLCOATH MINING COMPANY.

DOLCOATH MINING COMPANY.

A three-monthly meeting of adventurers was held at the mine on A three-monthly meeting of adventurers was held at the mine on India, when there was a large attendance. The report was conforday, when there was a large attendance. The report was conforday, when there was a large attendance. The report was conforday, when there was a large of the confordation of the three months of so large of form of the three months of the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. BUTI IN occupied the chair, and read the state-file Rev. W. W. Buti I have been compared to the state of engine-shaft as being file state at the state of engine-shaft in the state of the south part of the lode, which is worth 50%, per fathom. The winze under the south part for greater speed. The winze under the 302, 15 fms. before this the south part, which is worth fully 200%, per fathom: this part is also standable north part, which is worth fully 200%, per fathom; this part is also standable north part, which is worth fully 200%, per fathom; this part is also standable north part, which is worth fully 200%, per fathom; this part is also standable north part, which is worth fully 200%, per fathom; this part is also standable north part, which is worth fully 200%, per fathom; this part is also standable north part, which is worth fully 200%, per fathom; the engine-shaft preparatory to sing below the 31. We are also driving north at the engine-shaft preparatory to single show the state of engine-shaft preparatory to the south part, which is worth fully per fathom. The 230, east of new east, worth 12% per film. The

ved, and Mr. H. P. VIVIAN seconded, the adoption of the

eret."

SMAY moved, and Mr. H. P. Vivian seconded, the adoption of the semant of accounts, which was carried unanimously, atement of accounts, which was carried unanimously.

SIAH THOMAS (the manager) said that the report would if, and in it would be found a fair statement of the accounts and the the mine. The dividend was small to what it was a year and a half they were all aware the price of tin had gone down, whilst the price iron and coal—had gone up. They could have paid more by work-differently, by not working the ends, but if worked in that manner would be a most suicidal policy. (Hear, hear.) They were working the future as well as the present. He found that some persons were lat success; for instance, when the was 1000, per ton they said it would be 2000, whereas now tin was at a low price they were unduly dethought that the price would never improve, and that the time for gone. He did not think that Cornwall was done yet. (Hear, hear.) ago they heard that Dolcoath was going down, but since that they are diedeept, and paid 300,0000, and the thought that the old lady did not with the improved prospects of the mine they would again be able dividends. Some had said that they were working too deep, but he so, for what with man-engines and other improved mechinery they where, and, indeed, their whole success depended on their going elieved that better things were in store, and that the mine was look-ly well. (Applause.)

proposed a vote of thanks to the Chairman for presiding, and Mr.

(Applause) hanks to the Chairman for presiding, and Mr. ferred to the dividend received last year, and stated that he st together, and found he had not got such a bad sum after in whatever form they invested their money they could not as a stey did some years since. (Hear, hear.) He still had believed, with Capt. Thomas, that better things were in store

WHEAL BASSET MINING COMPANY.

al meeting of shareholders was held at the mine, on Tues general meeting of shareholders was held at the mine, on Tues-for R. Rosewarne presiding. The accounts presented were-bour costs, 12 week, ending Aug. 29, 4732; merchants' bills for and August, 1482l.: total costs, 6214l. By copper ores sold, 149 tons, 1454l.; tin ores sold, 70 tons, 5145l.; sundries, 23l.: redit, 6622l.: less 1-24th, lords' dues on tin and copper, 275l.— Profit on the 12 weeks' working, 133l.; balance against the turers to end of June, 1873, 1988l.; debit balance carried to count, 1855l. The mine is looking well, and a good discovery en made in the 100 fm. level; and but for the present high of materials and low prices of minerals, Wheal Basset would good dividends. The agents report:—

sen made in the 100 fm. level; and but for the present high so finaterials and low prices of minerals, Wheal Basset would proof dividends. The agents report:—
t.f.ode.—The 112 fm. level, west of Richard's shaft, is worth for tin 37, per t.f.ode.—The 112 fm. level, west of Richard's shaft, is worth for tin 57, per fattom, divining at 44, per fathom wes are rising in the back of this level to comble with Stevens's shaft, which we shall complete, and the shaft brought is for the 100, east of Carnkie shaft, is worth for tin 37, per fathom, lefore our next meeting, rising at 37, per fathom, worth for tin 37, per fathom, the 35, per fathom. The 90 fm. level, east of Stevens's engine-shaft, is worth for ado coper 57, per fathom, driving at 47, per fathom. The 79 winze, east ens's shaft, is worth for tin 47, per fathom, sinking at 77, per fathom. We extense on this lode, worth on an average 97, per fathom, stoping at 45s. hom.—Carbonas: The 100 fm. level, east of Stevens's cross-cut, is worth for per fathom, driving at 47, per fathom of the 37 fm. level, east of Samplaft, is worth for tin 107, per fathom, driving at 127, per fathom. The 30 fm. at of Richards's cross-course, is producing stones of tin, driving at 46, per athom. The 30 fm. level, east of eshaft, is producing stones of tin, driving at 48, fathom. The 80 winze, week 10 km shaft is producing stones of tin, driving at 48, fathom. The 80 winze, week of the 80 fm. level, west of Richards's shaft, is worth for tin 47, per habom, per fathom, fine level, east of shaft is producing stones of copper ore, driving at 57, 10s, per fathom. The back of the 80 fm. level, west of Richards's shaft, is worth for tin 47, per athom.—Paddon's Branch: The 50 fm. level, east of shaft is producing stones of copper ore, driving at 54, per fathom. The 40 fm. level, west of Theaker's cross-corth for copper ore 54, per fathom, driving at 77, 10s, per fathom. The check, driving at 54, per fathom. The 40 fm. level, west of Theaker's cross-corth for copper ore 56, per fathom, driving at

VANCOUVER COAL MINING AND LAND COMPANY.

VANCOUVER COAL MINING AND LAND COMPANY.

The general meeting of shareholders will be held at the City Terminus Hotel, Cannon-street, on Tuesday, when the following report if the directors will be presented:—

The accounts for the six months ending June 30 show that the profits amount to Ref. so, lot; this, added to the balance brought forward from last half year, was for disposal the sum of 8702. 18s. 5d. The coal sold amounted to 23,431 tons were sized from all sources reached only 17,511 tons, of which 11,384 tons were sized from the Douglas Pit, as against 21,673 tons during the preceding six months like the reduction was wholly caused by the influx of water into the Douglas Microscopic and the six of t

eading from it became inaccessible. The water was all pumped out of the yy April 12, but there still remained in the level and stalls the clay and peat had been washed in with it, and to remove this has been a tedious operation, atting has been resumed in a few of the stalls, but the whole of the level will cleared until the close of the present year. In the meantime stalls are being a fine of the parts of the mine, and the output, which in January was only us, in June reached 2290 stons, and has since further increased. An important the Douglas Mine is that known as the Great Pitch, and from this levels end driven north and south. By the first a fine piece of coal ground has been Jup, and the latter has improved the ventilation, and made a better and more lined system of drainage practicable.—Douglas Shaft Exploration: The lower of coal reached by the deepening of the Douglas shaft, and known as the River Seam, has recently shown a slight improvement, 80 tons having been ted in July, and 157 tons in August. The bed is thick but irregular, and of the coal is soft. Further exploration is recessary to prove the value of idition to the resources of Nanaimo.

135 tons, principally from the slope and the levels extending from it. A fault gaiped out the coal in the slope, its further extension has been suspended eight of 553 yards, while other operations are being undertaken with a view faither the coal in the slope, its further extension has been suspended eight of 553 yards, while other operations are being undertaken with a view faither and the same resultings have easily and others are building; and the works both below and above deep hand others are building; and the works both below and above the other positions of the same position of the sland, called the Newcaste Seam, 1955 tons of coal been raised during the six months. No machinery has yet been put up at this weak as the fitzewilliam Mine. It is a small wind mine and the work pushed on, and the was one spoken of will be available for this as well as the Fi

to visit Nanaimo, and the report of his inspection of the mines was received in July last; this report contained some valuable suggestions for the future course of operations, and as regards the durable mature of the coal beds, and the management of the property, his opinion was most satisfactory. Acting on his advice, and in consequence of the increased number of works in operation, the directors have made an addition to their local staff by the appointment of an assistant-surveyor at Nanaimo. The directors recommend that a dividend for the half-year at the rate of 10 per cent. per annum be declared, which will absorb 4130%, leaving a balance of 2662%. 18s. 5d. to be carried forward.

'For remainder of Meetings see to-day's Journal.]

VIRGINIA: ITS ATTRACTIONS TO THE CAPITALIST AND THE EMIGRANT-No. V.

ITS MINERAL WEALTH AND NATURAL RESOURCES-(continued).

VIRGINIA: ITS ATTRACTIONS TO THE CAPITALIST AND THE BMIGRANT—NO. V.

We have in former papers given some account of the coal and iron regions of the western portion of the "Old Dominion," as the natives still delight to call the Virginias, and we now proceed to give a description of the limestone deposits, so necessary to the ironmaster, builder, mason, and agriculturist, with a brief notice of some of the other mineral resources of this highly favoured country. In going west from the seaboard we first cross the Tidewater Region, which has an average width of about 100 miles. It is nearly a plain of the Tertiary epoch, and consists principally of ecoene and miocone clays, marls, and sands, and of recent formations. The tidal rocks penetrate far into the interior, and are mostly deep, and in some of the larger estuaries, such as Hampton Roads, Elizabeth Rivor, &c., the largest vessel can easily reach the wharves, or find safe anchorage. The navies of the world could find accommodation in Hampton Roads at all times, and the harbour is so completely land-locked as to be safe from every storm. It was near here that the first settlement by Europeans took place at Newport News, which, when the railway now in contemplation from Richmond shall have been completed, will doubtless be the great outlet from the West. It must become one of the great commercial ports and cities of the Eastern States, available alike for the corn and cereals of the West as of the coal and iron of the great valley of the Virginias. Thus the intended eastern terminus of the Chesapeake and Ohio Railroad will be at Newport News; and there the water is so deep that the Great Eastern, or the largest ships alloat, could lie alongside the wharves without grounding even when the tide is at the lowest, and take in or unload cargo. The portion of rail yet to be laid to complete the line from the West to the sea is only about 700 miles, and it is intended that this shall be completed with the least possible delay.

It should be stated that the waters of

which, or 15 per cent., is carbon, or one square mile of this lime-stone, at an average of 1000 ft. thick, contains as much carbon as the general production of our anthracite coal fields to the square mile." In addition to the Silurian limestones there are large de-posits of the Devonian series, and the coal seams are interstratified by beds of very fine limestone from 3 to 5 ft. in thickness.

by beds of very fine limestone from 3 to 5 ft. in thickness.

Near Swoopes Station, on the Chesapeake and Ohio Railroad between Staunton and Buffalo Gap, there are beds of hydraulic cement limestone of good quality, as has been demonstrated by actual test. Considerable quantities of this have been shipped and used for cementing purposes. Again, on Dunlop's Creek, west of Covington, there are bands of the encrinal limestone, which is prepared and sent to market in large quantities. It forms an excellent cement, and immense quantities of this material are now used in internal improvements. From the preceding statements it is clear that there is an abundance—we may say superabundance—of lime for all purposes, whether building, smelting, or agricultural.

Near Keswick Station, which is in Albemarle County, near the eastern limit of that part of Virginia which is called the Piedmont Country, is a slate quarry, from which large quantities have been taken for roofing purposes. It is of a soft nature, and some bands of it would be well adapted to working up into ornamental works of art. The consumption of roofing slate in the West is increasing, and most of it is hauled from the Eastern States. There are many other

art. The consumption of rooming state in the west is increasing, and most of it is hauled from the Eastern States. There are many other valuable minerals in this district which we will allude to in our next paper, and conclude with a brief notice of the agricultural resources of this region, which from its exuberant fertility may be fairly termed the "Garden of America."

QUICKSILVER MINING IN PERU.

The latest quotation for quicksilver in the London markets being 18L per bottle, coupled with the circumstance that the demand is constantly increasing, will, doubtless, cause the attention of capitalists to be directed to the Santa Barbara, in the department of Huancavelica, the lease of which, upon favourable terms, is offered direct from the Peruvian Government. The bidding for the lease will take place about June or July next, it having been decided to publish the fact of the property being in the market in Lima, London, Paris, Vienna, Berlin, Dresden, New York, and San Francisco during six months from Nov. 1, in order to secure the most favourable offer. The deposits of cinnabar sufficiently extensive to permit of being worked are, comparatively so few that no fear, need be entertained of the market ever being largely overstocked, and it is the cinnabar deposits that form almost the selections of the market are selected. deposits that form almost the sole source of the marketable merdeposits that form almost the sole source of the marketable mer-cury. The deposits at Idria, in Carniola, and the methods of work-ing them have already formed the subject of several interesting papers by Mr. A. Plaminek, published in the columns of the Journal. The other great deposit of cinnabar in Europe is at Almaden, in Spain; but it is found also in fine crystals in the coal formation at Wolf-stein, in Rhenish Bavaria, in Sax-cuy, in the Harz, in Carinthia, Styria, Bohemia, Hungary, and Tuscany; in the Ural and Altai; in China and Japan; and in great abundance in California, Mexico, and Peru. The mines of Hungavellica, in Peru, are perhaps the most interest-The mines of Huancavelica, in Peru, are perhaps the most interesting of all, as their products are directly employed in treating the ores of gold and silver which abound in that portion of America. These quicksilver mines, explored since 1570, produced up to 1800, upwards of 53,700 tons of metal, and at the beginning of the present century the produce was about 1700 or 1800 quintals (about 5400).

bottles) per annum. The metallurgical treatment of the ores of quick-silver is by no means complicated; the cinnabar is crushed and some-times washed, and then introduced into retorts with an equal weight of quicklime; upon the application of heat the mercury readily separates.

times washed, and then introduced into retorts with an equal weight of quicklime; upon the application of heat the mercury readily separates.

The lease of the cinnabar mine of Santa Barbara, now offered by the Peruvian Government, is to be for 50 years from the date of signing the deed; working must commence within 18 months thereof, and must not be discontinued at any time for more than six consecutive months. Within six months of signing the lease the lessee must be ready with a company having a capital of 1,000,000 sols. The quicksilver obtained from the mine will beexempt from all duty, and the lessee or the company which he forms will have nothing to pay to the State unless the production of quicksilver exceeds 2000 quintals per annum. One-tenth of the produce beyond that quantity is payable to the Government. A caution of 10,000 sols must be deposited to give the right to bid, and after the adjudication the deposits of the unsuccesful bidders will be at once returned. The terms are, altogether, very satisfactory, and, with the present condition and prospects of the quicksilver trade, no difficulty whatever should be experienced in procuring the requisite capital for developing the property in such a manner as to make it highly remunerative to all concerned.

NEW ROCK DRILL-THE EXCELSIOR.

NEW ROCK DRILL—THE EXCELSIOR.

The constantly increasing difficulty of obtaining labour for mines, and the exorbitant demands of the miners when labour is obtained, render the general introduction of rock-drilling machinery of paramount importance, and to ensure this adoption it is essential that the machine should be simple, cheap, not liable to get out of order, and readily transportable. To obtain these qualities in combination in a single machine has proved to be by no means an easy task, and it is only after repeated improvements and repeated failures that any approach to perfection was arrived at. The first drill which was found to be really capable of practical application in the hands of ordinary workmen was the Burleigh, for the introduction of which into this country our miners are indebted to Messrs, Charles Ball and Co., of New Bridge-street and Paris, who spared no pains to demonstrate that the drill would really do the work for which it is intended, and caused it to be acknowledged that the substitution of machinery for hand-labour in the process of rock-drilling was perfectly practicable, although the best drill which they could then offer might be capable of certain improvements. The experience gained in connection with the introduction of the Burleigh enabled Messrs. Ball and Co. to discover the particular points in which modification was most desirable, and to turn their attention to the obtaining of a drill with fewer parts and more easily movable from place. Well knowing the Burleigh to be a good mawhich modification was most desirable, and to turn their attention to the obtaining of a drill with fewer parts and more easily movable from place to place. Well knowing the Burleigh to be a good machine when well made, they naturally gave the preference to a machine which was somewhat similar in principle rather than adopt an entirely different class of machine, and subsequently the firm was as energetic in pushing the power jumper as it had previously been with the Burleigh.

But it was soon found the power-jumper did not fulfil the condi-

been with the Burleigh.

But it was soon found the power-jumper did not fulfil the conditions required to stamp it a perfect machine, and continuing their
exertions Messrs. Ball and Co. are now prepared to bring forward
the Excelsion, in which the improvements have been carried one step the Excelsior, in which the improvements have been carried one step further. When the power-jumper was first introduced, in February last, it was pointed out that as compared with the Burleigh it had the great advantage of consisting of only one-third the number of pieces, and of being at the same time considerably cheaper, yet in the Excelsior Messrs. Ball are enabled to offer a machine of still greater simplicity, and with fewer parts, as well as at a smaller price. To permit of a comparison of the machines being readily made it may be mentioned that the Burleigh has 134 pieces, the power-jumper 44, and the Excelsior 30 pieces. The respective weights are—of the Burleigh, 162 kilos. (3\frac{1}{2}\cmtext{ cwts.}); power-jumper, 141 kilos. (2\cmtext{ cwts. 2 qrs. 14 lbs.}), an additional advantage claimed for the latter being that it can be instantly separated into two parts, one weighing being that it can be instantly separated into two parts, one weighing a little over 1 cwt. and the other about 1½ cwt., so that the difficulty of transportation is reduced to a minimum. And, lastly, the price of the Excelsior is less than either, and include the machine, tripod, 15 ft. length of india-rubber steam tubing, swages, &c., and duplicates of the several parts which are the most liable to wear. As soon as the Excelsior is in practical use in a mine the mechanical details of its construction will be published.

With regard to the compactness and simplicity of the Excelsior drill, it may be stated that within its single cylinder both pistons and slide valve are contained, so that the screw which keeps the and state varies are contained, so that the screw which keeps the drill to its work is enclosed in the cradle upon which the cylinder is mounted, and that the automatic feed is ingeniously arranged at the upper end of the cylinder, beyond reach of danger; but although all the working parts are thus carefully protected, any given valve, nut, or piston ring can be reached in a moment, in most cases by the removal of a single screw; so that in the event of any little hitch in working the cause of it can be quickly found and remedied, Another point which is worthy of notice is the mode of fiving the Another point which is worthy of notice is the mode of fixing the drill. With all the machines previously introduced it has been necessary in drilling deep holes to change the drill, substituting a longer for a shorter tool when a certain depth has been reached. This has been absolutely requisite owing to the manner in which the machine and the drill have been connected with each other. In the Excelsior the difficulty is very cleverly overcome. The piston-rod is made hollow, so that one long drill can be used instead of a set of made hollow, so that one long drill can be used instead of a set of drills, as has been hitherto employed. When the hole is commenced only as much of the drill projects as cannot be forced up the hollow

drills, as has been hitherto employed. When the hole is commenced only as much of the drill projects as cannot be forced up the hollow piston-rod, but as the work progresses the drill is drawn out and re-tightened. This is only practicable owing to the simple and peculiar mode in which the drill is fastened; it is held in position by a slotted collar tightened upon it by a key, which is readily accessible on the outside of the piston-rod. Every blow of the drill has a tendency to tighten the key by the concussion, so that there need be no fear of the tool slipping; yet, from the key being readily within reach, it can be instantly released by a mere tap of a hammer whenever it is necessary to lengthen or shorten the drill.

One great advantage of this arrangement is that the hole can be kept to the full size for the entire depth, which is impracticable when the drills are used in sets, for when the drill has to be changed it is almost impossible to place a second drill truly in line, so that to prevent binding a smaller drill must be used, and to have a 2-in, hole at the bottom we must commence with a quarter of an inch larger. With the new system of fixing the machine is not moved at all, so that the entire depth can be drilled uniformly and quickly. Another arrangement, which will be fully appreciated by practical men, is the mode of attaching the machine to the tripod. Hitherto there has been some difficulty in bringing the drill exactly into the required position, owing to the necessity of adjusting several motions, each dependent upon a different set of screws, &c., but all these have been dispensed with in the Excelsior by the use of an effective ball and socket-joint; by loosening a single screw the machine can be furned in any desired direction, and as soon as it has effective ball and socket-joint; by loosening a single screw the ma-chine can be furned in any desired direction, and as soon as it has been satisfactorily adjusted the screw need only be tightened, and the steam can be turned on at once. Altogether, the Excelsior promises to prove a good success, and its behavour in practical use will, therefore, be looked forward to with much interest by all connected with mining enterprise.

STEAM PUMPING MACHINERY .- During the recent cessation of STEAM PUMPING MACHINERY.—During the recent cessation of work at the Gelli Colliery, Rhondda Valley, a correspondent had an opportunity of inspecting the patent pumping machinery of Messrs. Hayward Tyler and Co., of London, which has for some time been in use, and which lately was awarded the Medal of Progress at the Vienna Exhibition (the only prize offered for direct-acting pumps). Mr. Charles D. Phillips, of Newport, put down the pumps referred to, together with several others in South Wales, all of which are giving the same excellent results. The following is the description given of the machinery:—The correspondent, on entering the level, observed a wrought-iron pipe running overhead, which carried the steam to the engines. At 352 yards he came to the first pumping engine. Though the steam-cylinder is but

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12 inches and the pump 6 inches, it was forcing over 10,000 gallons of water 117 ft. high, and through 485 yards of pipes. The steam pressure was 40 lbs., on the boiler, which is blaced at the outside of the heading, the steam being carried 403 yards through a 25-5 inch pipe. The second pump was working in an incline not far from the first, and supplied it with a part of its water. Its dimensions were exactly the same as the first one. It was raising the water 18 ft. vertically, through about 120 yards of pipe, the steam being carried 493 yards. The third pumpingengine was of rather larger dimensions, having a steam cylinder of 15 inches, and pump of 75 inches. It was raising about 17,000 gallons to a vertical height of 156 feet, through 858 yards of piping, the steam being carried 409 yards through 3-inch pipes. The last-named pump was in a lower seam, but the work performed was of the same character. In all cases the exhausted steam was condensed. The machines appeared to be working without the slightest effort, and quite alone, the attendant reguling himself in the open air, and stated that the only attention required was a little oil once a day. tendant regaling himself is was a little oil once a day.

FOREIGN MINES.

ROSSA GRANDE (Gold) .- Extract from letter dated Sept. 28:-BAUSSA GRANDE (Gold).—Extract from letter dated Sept. 28:—Bahu: The lode in the sump-shaft continues of fair size and quality. In the 38 east the lode is 5ft, wide, and that in the 38 west is become a little contracted, being at date 3ft, wide. A winze has been commenced in the bottom of the 28 east; there the lode is 4ft, wide, of average yield. The 18 west is discharging a great quantity of water. The lode is small at present, but of good quality. We have a small force employed stoping in the back of the 28 east, where the lode is of average size and yield.—Cacheciers: I have nothing new to communicate as regards this mine. Owing to the protracted drought the surface water is insufficient to fork to the 20, but stoping with a small number of people is being earried on in the back of the 10.

COLORADO TERRIBLE LODE. -The agent's advices to hand Oct. 27

 October 8 : Sales of ore, per vouchers:

 September ... To Stewart's Reducing Co.
 18 tons 1713 lbs. for \$2884*11

 October 4 ... To Swansea Smelting Co.
 15 998 1773*30

ondon.—Three furnaces: \$60,000. Favourable charcoal contract for 18 months neluded. Mine developing magnificently.—PROBERT, Eureka."

SAN PEDRO.—R. M. Kitto, Sept. 15: New Shaft: The water is not down 23 metres below the 135 fm, level; we have forked 3 metres since my SAN PEDRO.—R. M. Kitto, Sept. 15: New Shaft: The water is ow down 23 metres below the 135 fm, level; we have forked 3 metres since my ust. A winre sinking below the 135, on the north part of manto, is communicated rith the chiffon, which has ventilated this part of the manto: this winne will proque 2 tons of 25 per cent. ore per fathom: the whole width of the manto at this cint, which is 10 metres below the 135, is composed of wash dirt, mixed with clay and bright yellow copper ores throughout; it almost looks the same as the bed of river. A chiffon sinking below the 135, on the morth part of manto, in a south irection, will produce 2 tons of 25 per cent, ore per fathom. A stope in the back of the 47 fm, level, by two men, at ½ tribute, will produce 2 tons of 25 per ent, ore per fathom. A tribute plich at he back of the 47 fm, level, by two men, at ½ tribute, will produce 2 tons of 25 per ent, ore per fathom. A tribute plich at the surface, on the new manto, by two nen, at ½ tribute, will produce 2 tons of 25 per ent, ore per fathom. No. 2 manto is suspended; as the ore ose not yet concentrate I will prove one place first.—San Antonio Mine; In a new haft sinking below the surface, by six men, the ground is still favourable.—Caba fine: In a few haft sinking solve of the surface, by six men, the ground is still favourable.—Caba fine: In the Santa Helena mountain the lode is 2 ft. wide, producing stones of re. We are getting on very well with the raising of stones and clay for the enther the English mason arrives.

Mantany Coura Washiya —G. B. O'Reilly Sept. 18; Acequia;

ason arrives.

LD WASHING.—G. B. O'Reilly, Sept. 18: Acequia: e are pushing the building of gin putting the pipe together, umber: Four pairs of sawyers

ieds for carpenters' shop, summy,
as to have all ready when the water comes in.—Lumber: roady
as to have all ready when the water comes in.—Lumber: roady
as a decided and we shall soon have abunvance of the article.

RICA GOLD WASHING.—C. R. Clarke, Sept. 15: I am sorry to say
at the weather still continues dry, and water very short. I returned from La
ica yesterday, and whilst there I cleaned up about half of the sluice for the purbes of seeing how the gravel was paying, and I am well satisfied with the reold it, as it turned out better than I expected: we got over 2 lbs. of gold. We have
this is it turned out better than I expected: we got over 2 lbs. of gold. We have
the satisfied with the realt, as it turned out better than I expected: we got over 2 lbs. of gold. We have
the satisfied was the water list enclosed that
The satisfied water list enclosed that The

all make a good clean up, both in La Rica and

Malpaso Gold Washing.—C. R. Clarke, Sept. 17: I wrote to

we should have been sinking now but for the heavy showers we have had. We shall have to take away men from the plat above, and put them about sinking the well, but It would leave some estil working there, as they are breaking some very good ore, and the lode is still looking better; it is about 6 varas wide in this plate. This will be one of the best mines ever discovered in this duther, only giving a little time to open the still not in the still looking better; it is about 6 varas wide in this plate. This will be one of the best mines ever discovered in this duther, only giving a little time to open the still not in the still looking better; it is about 6 varas wide in this plate. The still looking better; it is about 6 varas wide in this plate. The still looking better; it is about 6 varas wide in this plate. The still looking the still looking better; it is about 6 varas wide in this plate. The still looking the

of which is running east and west, and has produced metal of enormous ley to the Real del Monte Company. It is my opinion that from so to 1000 carga (i.e., 120 to 150 tons) can be extracted weekly from the Providencia Mine of the above class metal; and there being a Rabeienda in court of the providencia Mine of the above class metal; and there being a Rabeienda in court of the start of the st

pper but also mattes, &c.

CAPE COPPER.—Railway traffic for four weeks ending Sept. 6, tons up and 11% tons down. Bills of lading are received for 125 tons of ore per nericun, 35% tons per Lynwood, and 55 tons ner Juliar Lynko. PER.—Railway trame 104 119e tons down. Bills of lading are received for 12 ons per Lyuwood, and 55 tons per Juliet Daniel. ' eded to Hondeklip Bay to complete cargo of about the complete cargo of about the second were sold on the 28th inst., by public tick

th 600 tons of ore and 23 tons of regulus, his arrived at awaisea. BENSBERG.—J. W. Hoffmann, Oct. 25: Last week we commenced thing a local west from the open-cast on to the lode, and made 6 ft. progress,

erred in the decising, caused by the breakage of part of the bucket elevator, during the repair of which the fine juggers and round buddles alone were in work. In the state of the machine we have taken down a piece of ground sylven, and from 20 to \$10\$. He does not ground and fine the state of the part of the part of the part of the state of the part of the state of th

shaft, the lode is disarranged and poor. The lode in the 56, west of 8an Fracion shaft, has improved a little during the past week, producing 1 ton of leaf one per cross-joint.

Los Quinientos Mine: The 65, east of Taylor's engine-shaft, continues had at lead ore. In the 55, east of Taylor's engine-shaft, is small, and spotted with poor. The lode in the 55, west of Cox's shaft, the lode has been changeable during the past week, worth \(\frac{1}{2} \) to per fathom. The lode has been changeable during the past week, worth \(\frac{1}{2} \) to per fathom. The lode in sheen changeable during the past week; it is now worth 1 ton of ore per fathom. In the \(\frac{1}{2} \), east of Addiss and \(\frac{1}{2} \) shaft, there is a strong open lode, producing occasional the \(\frac{1}{2} \), east of Henty's shaft, there is a strong open lode, producing occasional the \(\frac{1}{2} \), east of Henty's shaft, there is a strong open lode, producing occasional the \(\frac{1}{2} \), east of the contains a strong open lode, producing occasional the \(\frac{1}{2} \), east of the core. In the \(\frac{1}{2} \), east of San Carlos shaft, continues large, but does not contain lead enough to value at present.

There is no improvement in the \(\frac{1}{2} \), east of Judd's shaft. The \(\frac{1}{2} \), east of Judd's shaft, is suspended for the present, the men being put to cross-cut north to line sect a branch; the lode is worth 1 ton in a fathom. The men are east of Judd's shaft in the \(\frac{1}{2} \), east of Judd's shaft. The men are east of Judd's shaft in the \(\frac{1}{2} \), east of Judd's shaft in the \(\frac{1}{2} \), east of Judd's shaft, east of San Carlos shaft, and in advance of the \(\frac{1}{2} \), east of San Carlos shaft, and in advance of the \(\frac{1}{2} \), east of San Carlos shaft well defined, yielding 2 tons of ore per tations. In the sa, case the lode is small and poor, and the ground hard. In the 46 shaft, there is a promising lode opening out good stoping ground fathom. The lode in the 25, east of Footway shaft, is small, Shafts and Winzes: In Swaffield's shaft, below the 25, the lod north of the shaft. In Garido's winze below the 110 the ground small, yielding 35 ton of ore per fathom, with a good deal owinze below the 100 has decreased in value during the past few 1 ton of ore per fathom. Martot's winze below the 30 is situate in advance of the 100; the lode is a very promising one, yiel rese fathom.

ALAMILLOS.—Oct. 22: The lode in the 60, west of San Rai Sahaft, is harge and changeable; it yields good stones of lead at present. The in the 50, west of San Francisco shaft, improved very much a week ago, but has somewhat failed, yielding 3/ ton of ore per fathom. In the 50, cast of Magdalena shaft, the lode is small and poor. In the 55, cast of Taylor's engine-shaft, is large, yielding good stones of lead, worth ½ tone per fathom. On the 50, east of Raylor's engine-shaft, is large, yielding good stones of lead, worth ½ tone per fathom. In the 50, west of San Yago shaft, the slide is rising fast, and shall intersect the lode in the course of a few days. The lode in the 50, east of little fast, and shall intersect the lode in the course of a few days. The lode is rising fast, and shall intersect the lode in the course of a few days. The lode in the 50, east of San Victor's shaft, the lode is small, and unproductive in the 50, west of San Victor's shaft, the lode is small, and unproductive in the 50, west of San Victor's shaft, the lode is small, and unproductive to the east of the cross course; it lets out a good deal of water, containing a stones of ore. The ground is very hard for driving through in the 90 fm.l ground yielding ½ ton of ore per fathom. There is no improve in the 40, east of air shaft, so groung good tribute ground, yielding ½ ton of ore per fathom. There is no improve in the 40, east of Crossly's shaft, the lode contains a little lead, but not enoug value. In the 50, west of Crossly's cross-cut, the lode is divided into two or branches, yielding ½ ton of ore per fathom. In a cross-cut driven south from 40, west of Morrivs's shaft, a lode has been intersected containing a little lead, but not so ore branches, yielding ½ ton of ore per fathom. In a cross-cut driven south from 40, west of Morrivs's shaft, a lode has been intersected containing a little lead, but not ore per fathom. Caro's wince, below the 43, is sunk in advance of the 83, east of Taylor's. The lode is large, yielding goods of ore ALAMILLOS.—Oct. 22: The lode in the 60, west of San Rais

[For remainder of Foreign Mines, see to-day's Journal.]

AUSTRALIAN MINES.

ENGLISH AND AUSTRALIAN (Copper),—Advices from the manage, dated Port Adelaide, Sept. 19: There was still a large stock of coal on hand a Padelaide. At Port Adelaide there were three furnaces smelting, two funaw roasting, and one refinery at work. At Newcastle all the furnaces were fully a

YORKE PENINSULA.—The directors have advices from the com YORKE PENINSULA.—The directors have advices from the committee at Adelaide, dated Sept. 10, with reports from the Kurilla Mine to the state of the committee, finding that operations at the Kurilla Mine had been carried to point beyond which with the means at their disposal they could not advantageous prosecute them, suspended them temporarily in September, until further find shall be made available to them. To attain this end the board will shortly be in position to be able to proceed with the proposed arrangements for raising further capital, which have already been submitted to the shareholders. The advices a ceived by the present mail continue to present the same favourable features as gards the prospects of the Kurilla Mine. It is important to notice that opendies in progress at the Burea Burea Mine appear to be indicating more andmore dead the locality in which the ore is likely to be found in the company's Bon seed property.

PORT PHILLIP AND COLONIAL (Gold).—Clunes, Sept. 8: Thequar-

ANGLO-AUSTRALIAN (Gold) - Capt. Raisheck Fryerstown Sept.

SCOTTISH AUSTRALIAN.—The directors have advices from Sylle-SCOTTISH ACCIDENT.

Accided Sept. 6, with reports from the Lambton Colliery to the 4th.

coal for the month of August amounted to 14,113 tons.

WATSON BROTHERS.

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1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

SATURDAY.—Market very quiet. Dolcoath, East Basset, and Greville, firmer. Dolcoath, 50 to 52½; East Basset, 15 to 17½; Grewille, 4½ 45% South Roman Gravels, 1½ to 1½; Crebor, 4 to 4½; Hingston Down, 1½ 5% Tankerville, 11 to 11½; Emma, 3½ to 3½.

MONDAY.—Very little doing. Dolcoath, East Basset and Grewille still in & mand. Dolcoath firmer, at 55 to 60; East Basset, 15 to 17; Grenville, 4½ to 10-10 to 10 t



TWO GRAND

MEDALS for PROGRESS



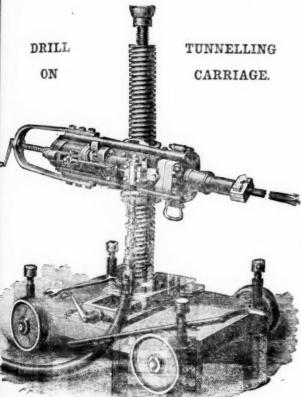
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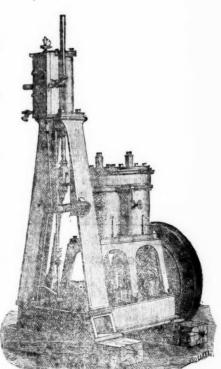
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COST OF SHAFT BY MACHINE

COST OF SHAFT BY HAND During a Fortnight.	Sinkers, three, 12 days each, at 5s. 9d £10 7 0 Labourers, six, 12 days each, at 3s. 6d 12 12 0 Engine Stokers, two, 12 days each, at 2s. 6d 3 0 0
inkers, twelve, 12 days each, at 5s. 6d £39 12 0 Vater Fillers, three, 12 days each, at 3s. 6d 6 6 0	Dynamite, 60 lbs., at 2s
Total	at 10s

Depth Sunk 3 yards—Cost per yard . . £15 13s. 4d. | Depth Sunk 5 yards—Cost per yard . .

THE ABOVE STATEMENT REPRESENTS WHAT IS NOW BEING DONE AT THE ABOVE MINE.

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This machine is the latest out; it is self-acting, self-feeding, self-stopping. It has fewer parts than any other drills, and its simplicity is remarkable. It is specially adapted for sinking and vertical work.

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ANY LARGER SIZE TO ORDER.

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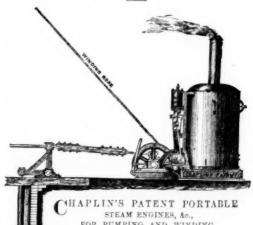
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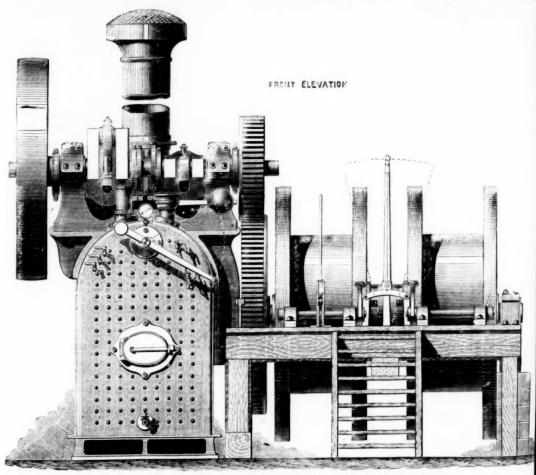
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ALSO OF PATENT PORTABLE

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FOR MINING PURPOSES. This Engine is specially commended to Mining Engineers and others, as by its adoption-

This Engine is specially commenced to siming languages and values, and the special problem of the strength of the expense of sinking new shafts is greatly reduced, neither foundations nor engine-house being required. It is available not only for winding, but for pumping, sawing, &c.—a great desideratum at a large colliery; It can be very quickly removed (being self-propelling), and fixed in any desired position.

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THIS OIL is suitable to every kind of Machinery. As a lubricant it is equal to the best Spanificant Oil, while it possesses the great advantage of being entirely free from any principle which all

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rrode the metal bearings. For particular kinds of Machinery, the Oil may be specially prepared of a consistency and charge

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"I herewith certify that the Rangoon Engine Oil, manufactured by Messrs, Chas, Price and Oil, free from any material which can produce corrosion of the metal work of machinery. It is been calculated to protect metallic surfaces from oxidation.

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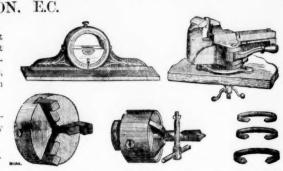
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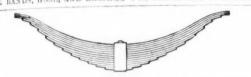
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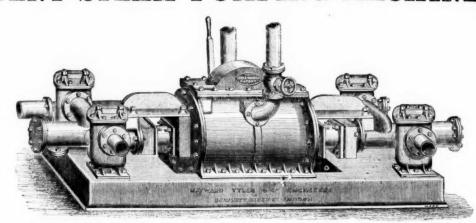
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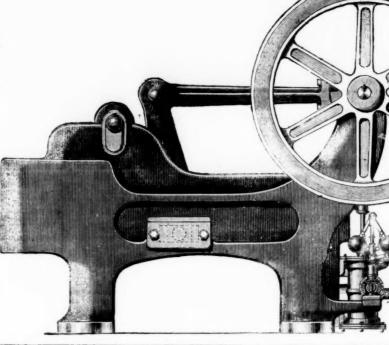
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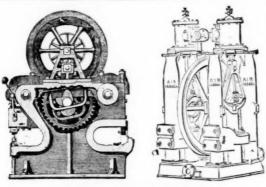
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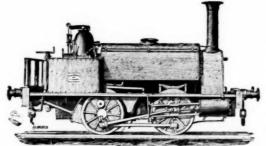
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